

# INTRODUCTION TO ODONATA

With Identification Keys for  
Dragonflies & Damselflies Found in Kerala

Version 2.0



**Society for Odonate Studies**

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Version 2.0

*Edited by*

**Jeevan Jose & Vivek Chandran A**

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**Society for Odonate Studies**

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# Foreword

Scientific enquiry is an adventurous journey without any final destination. Science evolves; it modifies, rectifies and improves itself all along the road. Knowledge has no horizon.

Within less than a year, Society for Odonate Studies (SOS) has been able to bring out the revised version of *Introduction to Odonata With Identification Keys for Dragonflies & Damselflies Commonly Found in Kerala*. The significant revision is the inclusion of photographs of females of most species. Species newly discovered or reported for the first time in the last year in Kerala also have been included. The editors, Messers Jeevan Jose and Vivek Chandran, both Governing Council members of SOS, have done exemplary work in bringing out the new version.

This e-book is available free of cost, downloadable from SOS's website. SOS has surged forward in spreading knowledge about dragonflies of Kerala. It is hoped that the reader would make good use of it by enhancing their own awareness about the world of dragonflies and spread the message of nature conservation.

Balachandran V.

# Foreword to the first version

Like any other form of life, Odonates (dragonflies and damselflies) are a window to the expansive view of nature. From among the described 9,25,000 species of insects, odonates though only numbering around 6250, have captured our attention more than any other except perhaps butterflies. However, scientific enquiry on odonates in India is lagging much behind that in the Western world. One of the reasons could be the lack of awareness among the public. It is heartening to note that in recent times there is a surge of interest in Odonata among young naturalists and wildlife enthusiasts. The contribution of organizations like Society for Odonate Studies (SOS) in popularizing this wonderful insect is significant.

Correct identification of species is essential in understanding their ecology. This e-book, *Introduction to Odonata With Identification Keys for Dragonflies & Damselflies Commonly Found in Kerala* provides not only beautiful images of the species but also their identification keys. The images have been generously contributed by several individuals and have appeared on Wikipedia platform. Mr Jeevan Jose, President, SOS, has taken tremendous effort in compiling the photographs and also in preparing the ID keys. The illustrations on the morphology, life cycle, behaviour and other aspects of the life of dragonfly and the science of odonatology give an excellent understanding of the subject to the reader. This is an important milestone in the scientific pursuit of Society for Odonate Studies (SOS).

New species are being discovered; modern scientific methods reveal hitherto unknown aspects of Odonates. The cryptic nature of the female and juvenile of the species will have to be addressed. It is hoped that SOS would be able to bring out periodic revisions and updates to this edition.

Knowledge is to be shared freely among all, especially when it contributes to understanding and protecting nature.

Balachandran V.

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# Introduction

The Order Odonata is among the most ancient of Earth's fauna. Fossils of the order Protodonata, the first recognizable progenitors of present-day dragonflies, are known from the Upper Carboniferous period 320 million years ago. Odonata comprises of three groups- Anisoptera (Dragonflies), Zygoptera (Damselflies) and Anisozygoptera.

Odonates lay their eggs in fresh water and the larger part of their lives as larvae is spent in the aquatic habitats such as rivers, lakes, ponds or even water-filled tree holes. The metamorphosis of Odonata has only three stages, egg, larva and adult. The larval lifespan varies from a few weeks to several years during which period they grow in size by shedding their exoskeletons. The fully grown larva emerges from water and the aerial stage of life begins. Life as a flying insect lasts only a few months.

Life of the adult odonate is spent in foraging, establishing territory and finding a mate to ensure progeny. Odonates are carnivorous; they are cannibalistic too. Most species spend their lives near water bodies. Species like *Pantala flavescens* migrate long distances like from India to Africa. Their next generation migrates back and the cycle continues forever.

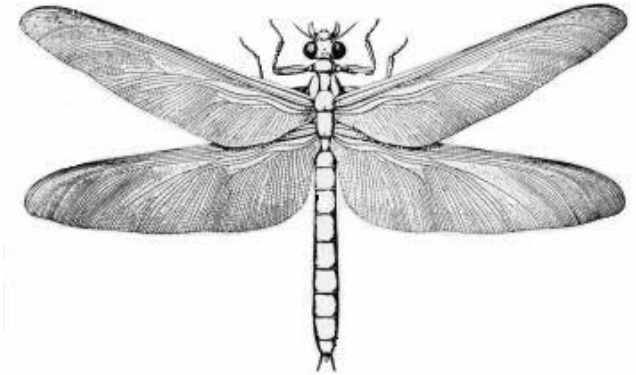
Odonate behaviour is a fascinating subject to study. They are very aggressive, agile fliers (can fly forward and backward, upward and downward, hover). They hunt and feed mostly on the wing. Their compound eyes each has up to 30,000 ommatidia and the visual field is almost 360°. They can detect colour, UV light and movement, which make them perfect hunting machines. It has been reported that they have a successful hunting rate of 95% compared to 50% of a Great White Shark or 25% of an African Lion.

The habitats of these beautiful insects are under threat as humans relentlessly destroy the environment, water bodies dry up or get land-filled or contaminated beyond redemption. As on date the number of identified odonate species are: over 6300 in the world, 493 in India, 196 in the Western Ghats and 175 in Kerala. Many more remain to be discovered. Unless the natural environment is protected and conserved, we stand to lose them forever.



# Evolution

- **Odonata** - an order of carnivorous flying insects (Pterygota)
- A monophyletic group (clade), existed since **Permian-Triassic** period (about 250 million years)
- Belongs to the **Odonatoptera** super-order, which existed since the **Carboniferous** period (320 million years)
- Odonata is the only living member of this super-order now
- Some other orders like **Meganisoptera** had members like *Meganeura monyi* having a wingspan of 70 cm and *Meganeuropsis permiana* having a wingspan of 71 cm
- Unlike the true Odonata, they had no **pterostigma**, and a somewhat simpler pattern of veins in the wings
- They had no **male copulatory organ** at the second abdominal segment too
- **Crown Odonata**: *Triassolestodes asiaticus* Pritykina, 1981. Triassolestidae. Type location: Kyrgyzstan. Minimum age: 237 million years



© Dodoni



© Alexandre Albore

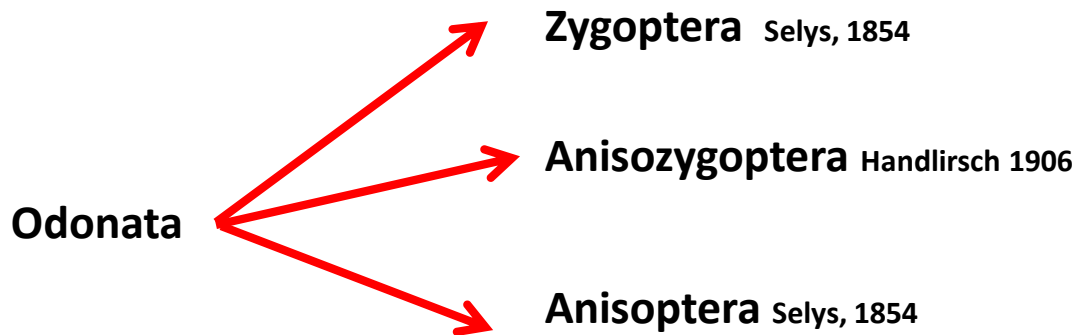
*Meganeura monyi*

# Taxonomy

**Kingdom** : **Animalia** Linnaeus, 1758

**Class** : **Insecta** Linnaeus, 1758

**Order** : **Odonata** Fabricius, 1793



There are other classifications like the combined suborder **Epiprocta** (in which Anisozygoptera and Anisoptera are infraorders). But classification of Anisoptera as a suborder along with Zygoptera and Anisozygoptera is easier to understand and widely popular.



© Rison Thumboor

**Zygoptera (Damselflies)**



© Daiju Azuma

**Anisozygoptera**



© Jeevan Jose

**Anisoptera (Dragonflies)**

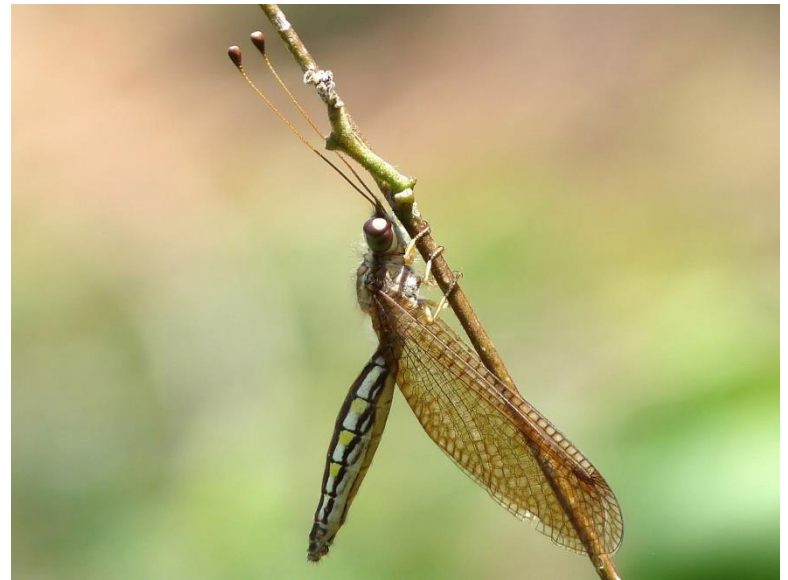
# Similar Organisms

They are members of Order **Neuroptera**. Dragonflies were considered under this Order before Fabricius assigned a unique order **Odonata** for dragonflies.



© Jeevan Jose

**Antlion (Myrmeleontidae)**



© Jeevan Jose

**Owlfly (Ascalaphidae)**

# Dragonfly versus Damselfly



© Vengolis

1. Eyes together
2. Forewings & hindwings unequal in size; hindwings broader at the base
3. Strong & robust body
4. Wings spread out at rest
5. Strong agile fliers



© Jeevan Jose

1. Eyes wide apart
2. Forewings & hindwings approximately of the same size and shape
3. Slender & fragile body
4. Wings usually held together dorsally over abdomen
5. Comparatively weak fliers



# Size

**Largest odonata:**

***Megaloprepus caerulatus***

**Wingspan: 190 mm**

**Body length: 120 mm**

**Largest dragonfly:**

***Petalura ingentissima***

**Wingspan: 160 mm**

**Longest odonata:**

***Mecistogaster linearis***

**Body length: 135 mm**

**Smallest dragonfly:**

***Nannophya pygmaea***

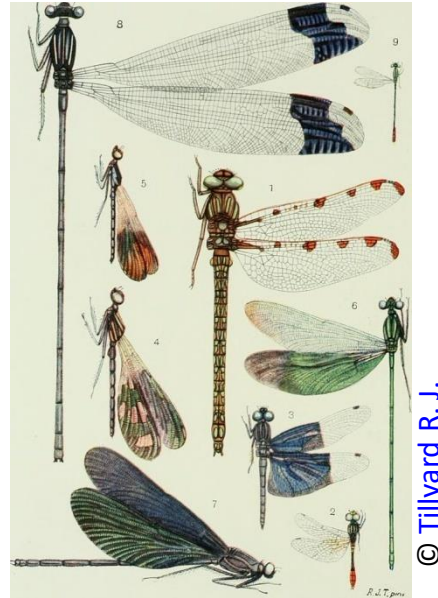
**Wingspan: 20 mm**

**Body length: 15 mm**

**Smallest damselflies:**

***Agriocnemis* species**

**Wingspan: 17 mm**



© Tillyard R. J.

**All figures proportional  
to their natural size**



© Steven G. Johnson

***Megaloprepus caerulatus***



© Alpsdake

***Nannophya pygmaea***

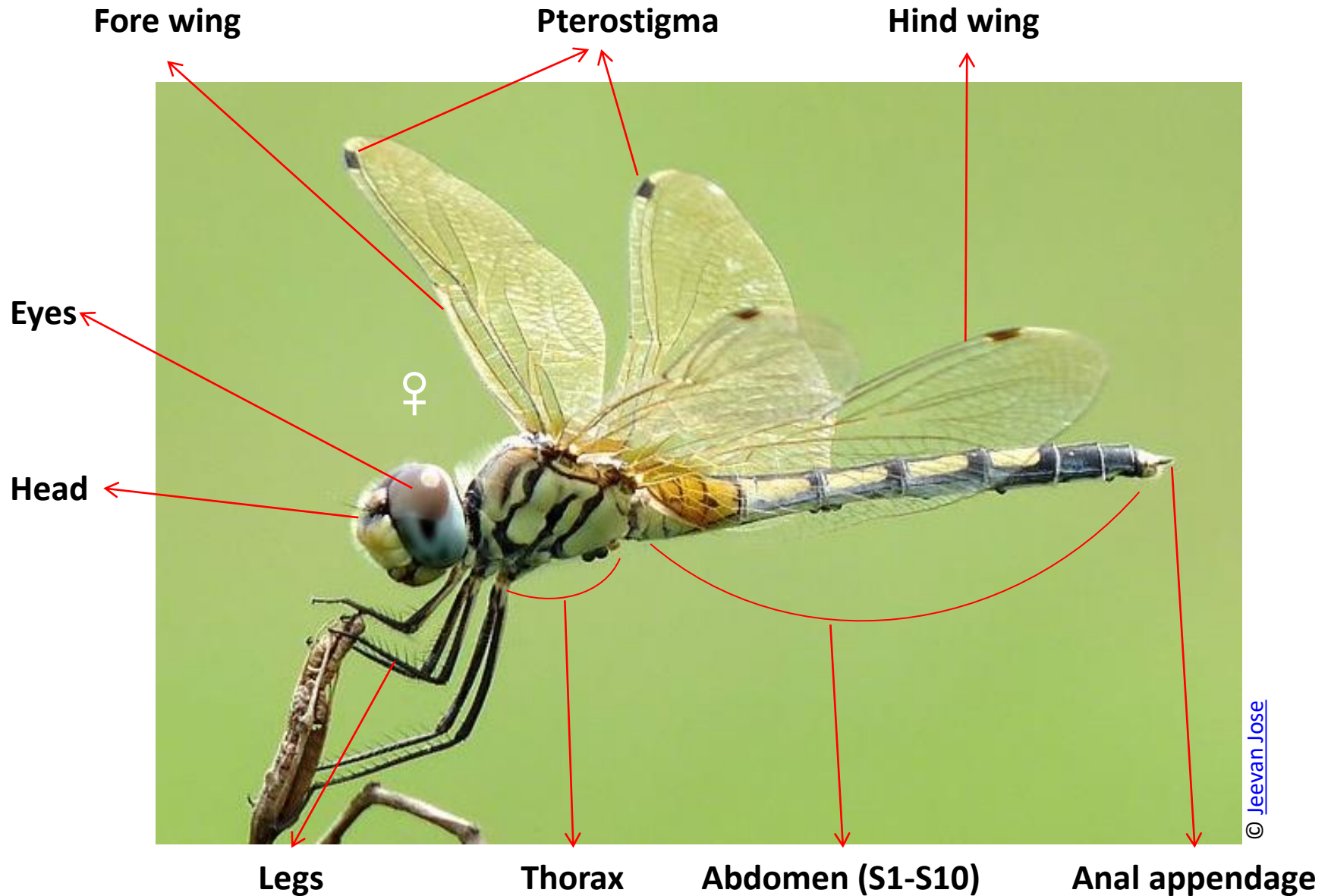


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***Agriocnemis pieris***

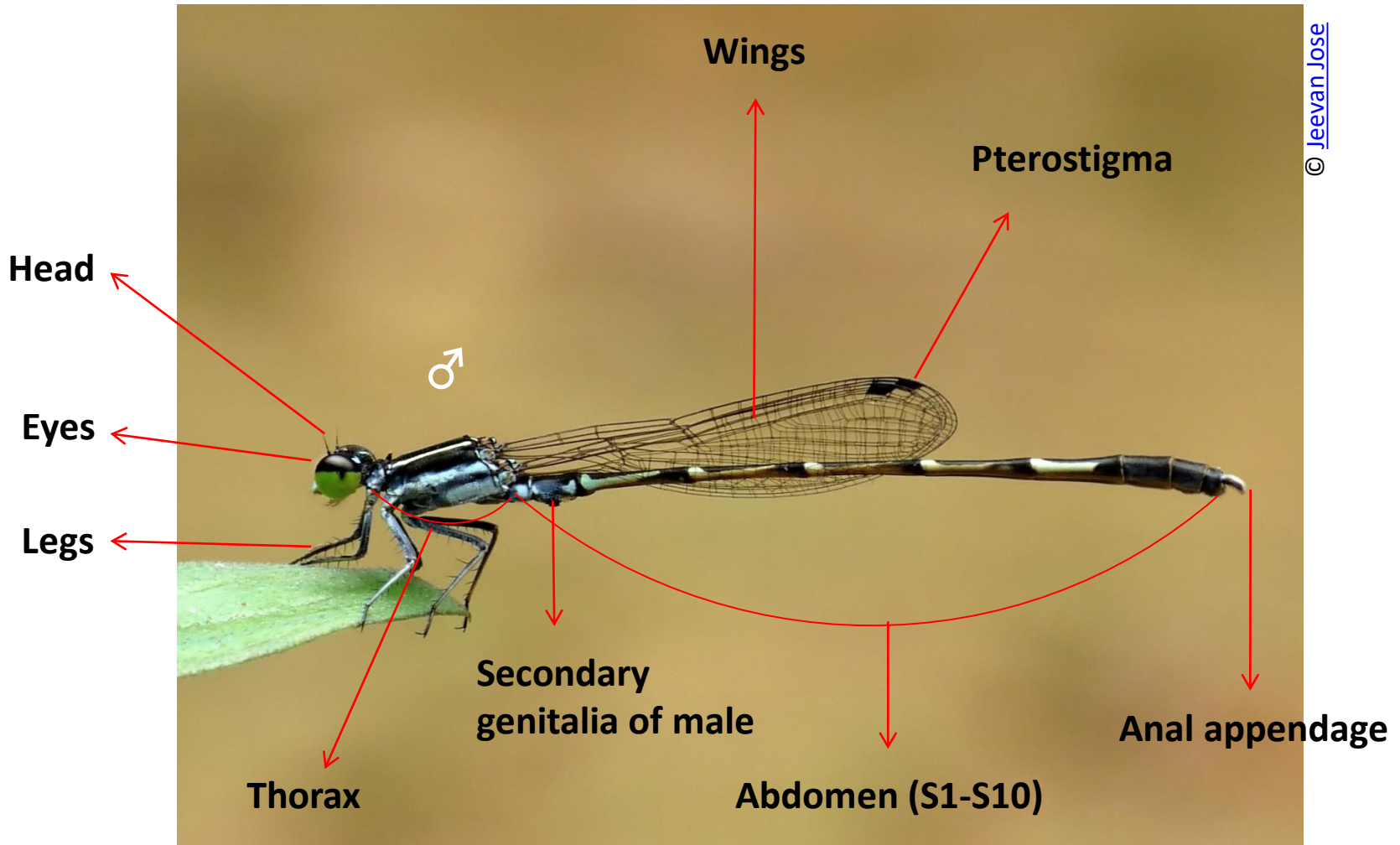


# Morphology of a Dragonfly



© Jeevan Jose

# Morphology of a Damselfly



# Head



**Dragonfly**



**Damselfly**

occipital triangle

antenna

ocelli

vertex

compound eye

frons

postclypeus

anteclypeus

labrum

labium

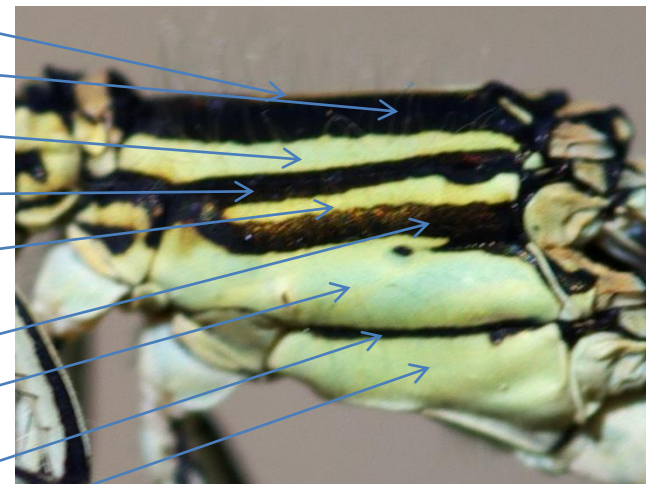
© Charles J Sharp



**Dragonfly**

## Thorax

- dorsal carina
- mesepisternum
- ante humeral stripe
- humeral suture
- mesepimeron
- mesepimeral suture
- metepisternum
- metapleural suture
- metepimeron



**Damselfly**

© Jrguillaumin

## Abdomen

**Dragonfly**



**Secondary genitalia**

S1-S10

**Anal appendages**

**Damselfly**



© Jeevan Jose



# Dragonfly Leg

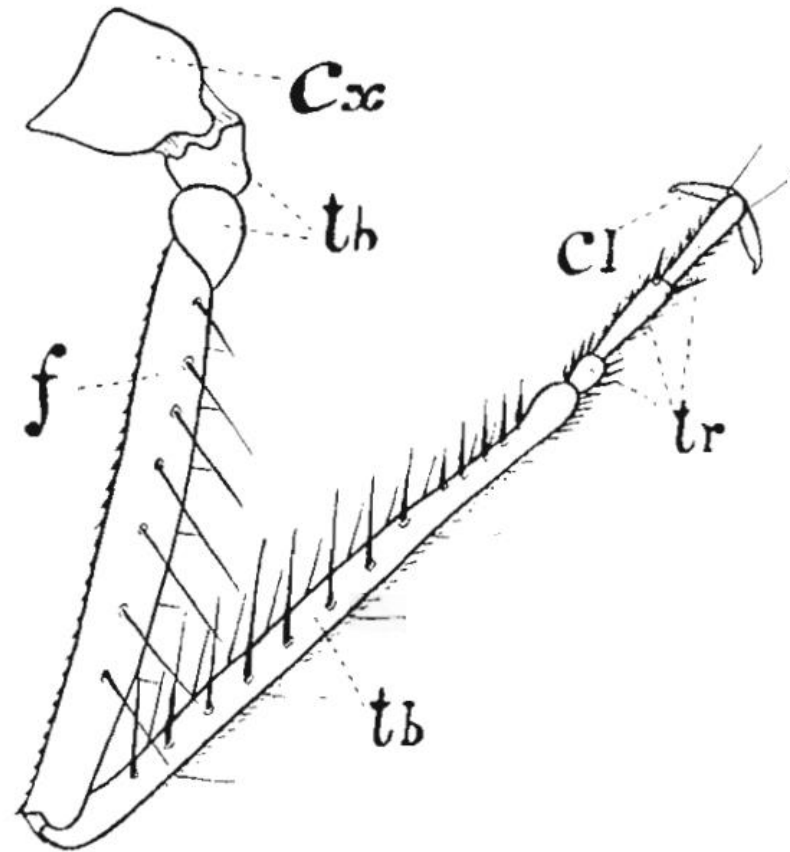
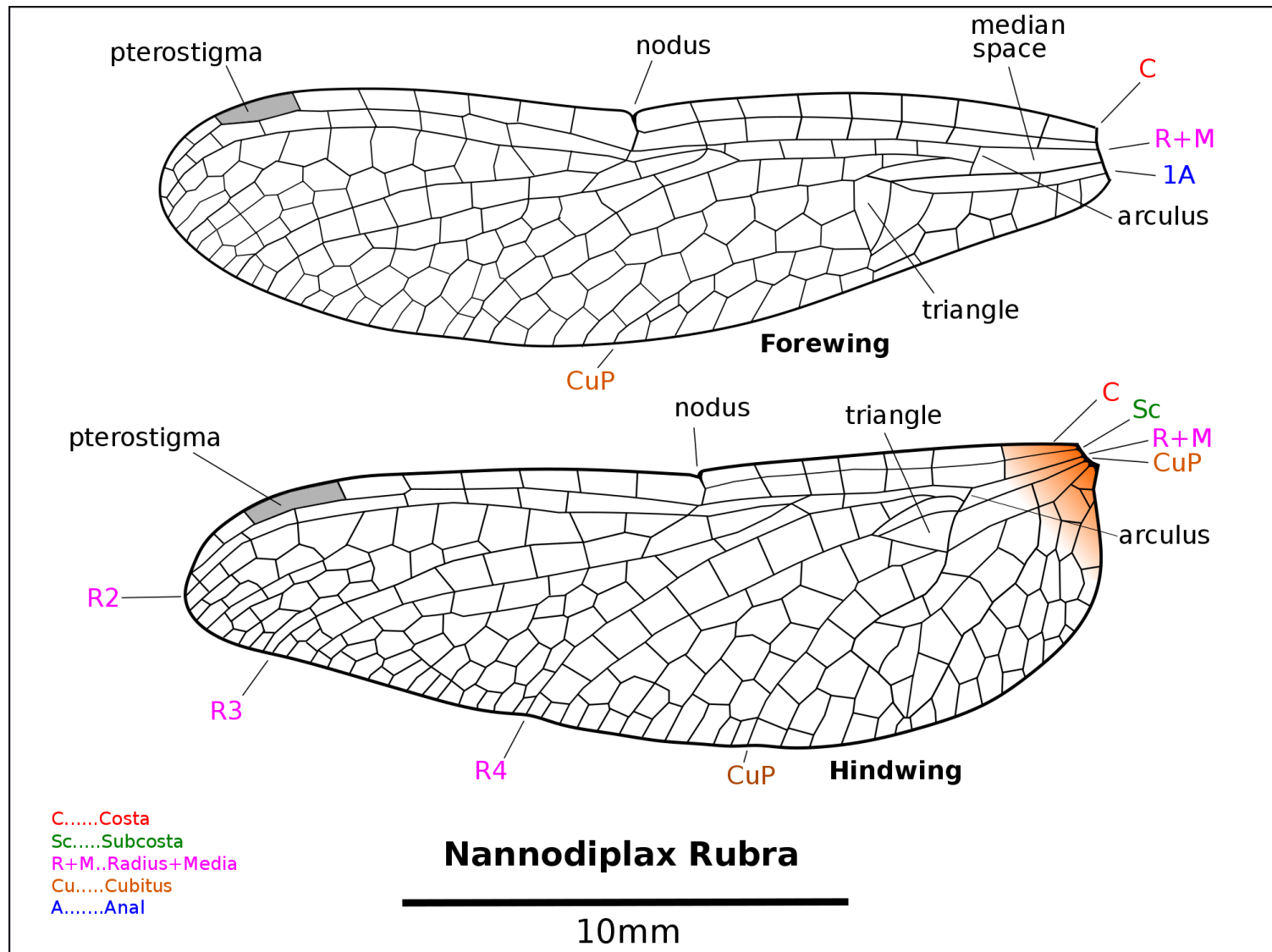


Fig. 4.—Leg of a Zygopterous dragonfly.

*Cx*, coxa ; *th*, trochanter ; *f*, femur ; *tb*, tibia ;  
*tr*, tarsus ; *Cl*, claw.

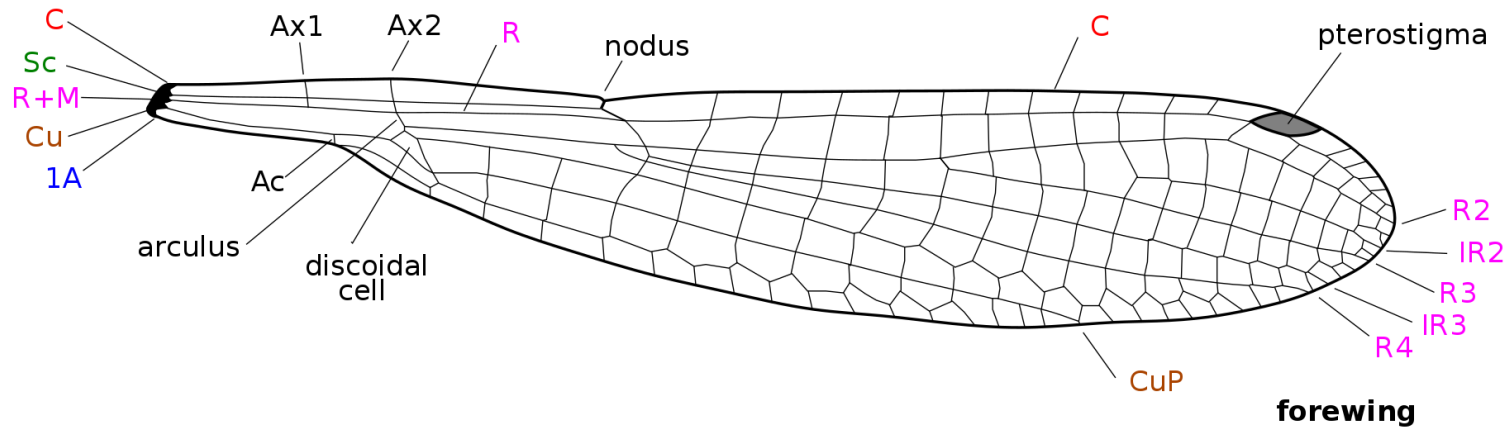


# Illustration of Dragonfly Wings



# Illustration of Damselfly Wing

Both fore and hind wings are similar



*Pseudagrion microcephalum* (female)

C.....Costa  
Sc.....Subcosta  
R+M..Radius+Media  
Cu.....Cubitus  
A.....Anal

10mm

Ax1 Primary antenodals  
Ax2  
Ac Anal crossing

# Mating and Egg laying



© Rison Thumboor



© Rison Thumboor

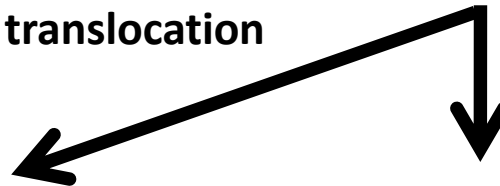


© Rison Thumboor

**Tandem**

**Intra-male sperm  
translocation**

**Heart (wheel)**



**Exophytic oviposition**

**Endophytic oviposition**



© Rison Thumboor



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**Unguarded**

**Tandem guarding**

**Unguarded**

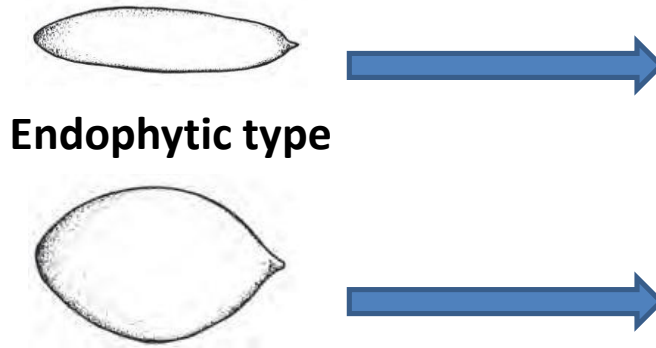
**Tandem guarding**

# Life cycle (Hemimetabolism)



© Rison Thumboor

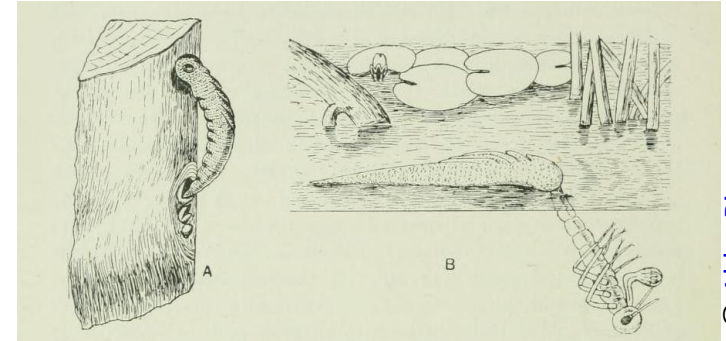
Oviposition



Endophytic type

Exophytic type

**Egg**



© Abbe Pierre

Hatching of egg



© WWalas

**Imago**



© WWalas

Emerging



© Rison Thumboor

Climbing out of the water



© Wim Rubers

**Larva** (several moults)



# Emergence of a Dragonfly





# Maturation phases of *Trithemis aurora*



© [Muhammed Sherif](#)

**Teneral male**



© [Jeevan Jose](#)

**Juvenile male**



© [Muhammed Sherif](#)

**Sub-adult male**



© [Jeevan Jose](#)

**Female**



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**Mature male with pruinescence**

# Sexual Dimorphism

Difference in characteristics beyond the differences in their sexual organs



© [David V. Raju](#)

**Male**



© [Jeevan Jose](#)

**Female**



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**Female (androchrome)**



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**Male**



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**Male (juvenile)**



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**Female**

# Andromorphism

- In some odonate species, especially dragonflies, some females have the colours of males.
- This is believed to be an adaptation to evade the constant harassment by males.



***Crocothemis servilia* andromorph female**



***Urothemis signata* andromorph female**



# Gynandromorphism

- Gynandromorphism is the occurrence of both male and female tissues in an individual organism.
- It is believed to be a genetic aberration and is rare in odonates.



A gynandromorph *Crocothemis servilia*

© [Renjith R V](#)

# Adult Behaviour

- Foraging, Territorial defense and Patrolling – *Perchers, Fliers, and Gliders*
- Thermoregulation – *Basking, Gliding, Obelisk posture*
- Dispersal and Migration – *Limited dispersal, cyclic migration*
- Congregation and Communal roosting



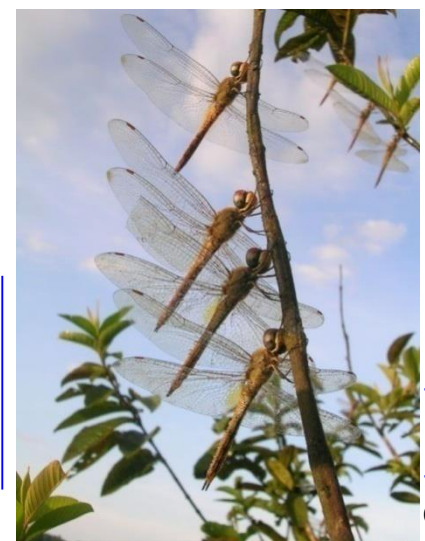
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**Obelisk posture**



© Rison Thumboor

**Gliding**

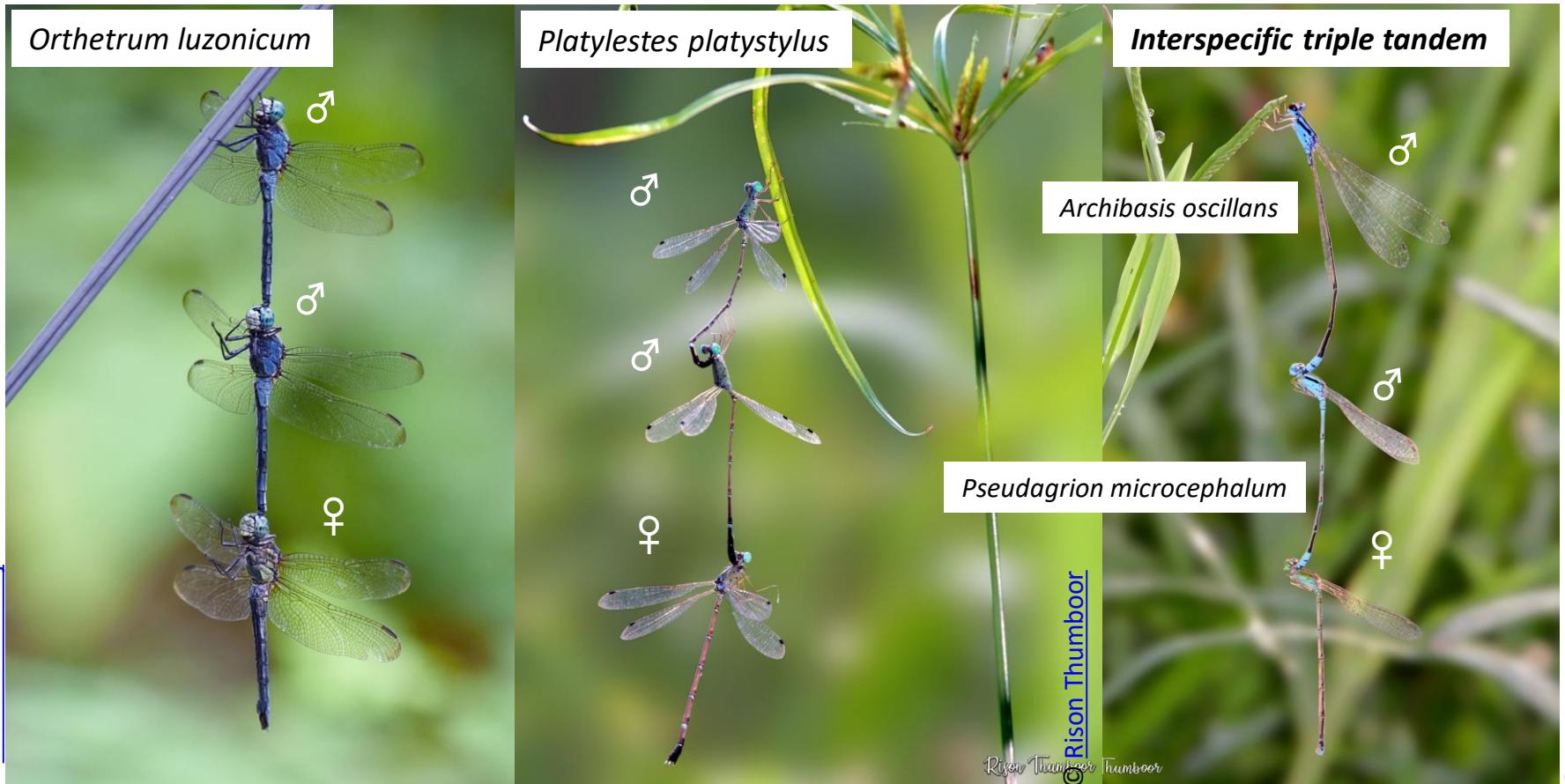


© Shyamal L

**Congregation**

# Triple Tandem

- It is a situation where a male in tandem with a prospective mate is held by the anal appendages of a second male. This is thought to be either a strategy of the second male to dislodge the first one or a mistake in identifying the sex. Rarely, interspecific triple tandems are also observed.





# Feeding

They actively hunt small insects such as mosquitoes, swarming flies, butterflies and other dragonflies they capture using their legs



© [Dariusz Kowalczyk](#)



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# Cannibalism

- It is the predation of an individual by another individual of the same species. It is not uncommon in Odonata and has also been recorded in their larvae.

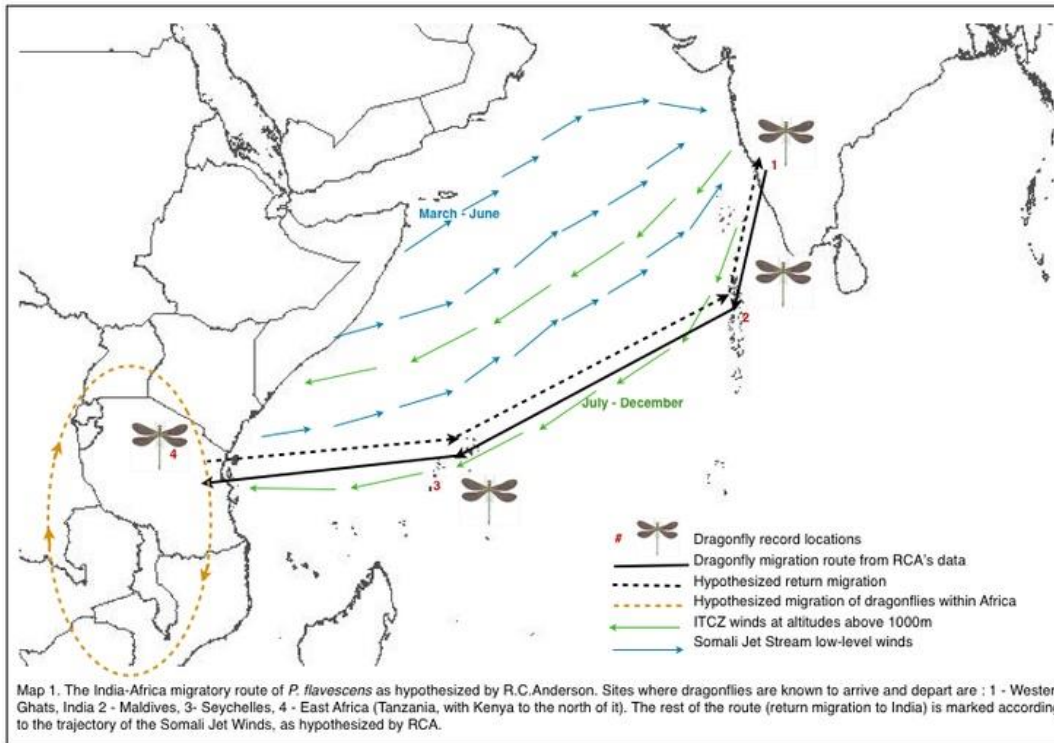


Cannibalism in *Orthetrum sabina*

© [Muhammed Sherif](#)



# Migration & Dispersal



© Rison Thumboor

- ***Pantala flavescens* migrate from India to Africa covering about 18,000 km**
- ***Anax parthenope*, *Anax ephippiger* are also migratory**
- ***Pseudagrion decorum*, *Pseudagrion microcephalum*, *Ischnura rubilio* etc are locally migrating damselflies**

# Predators and Parasites

- Mymaridae are parasitoids of eggs of other insects like odonates
- Water mites (Hydrachnidia) larvae feed on haemolymph of odonates
- Other predatory animals like birds, spiders, frogs, lizards, wasps etc hunt odonates
- Bigger odonates hunt smaller ones
- Carnivorous plants like *Drosera* capture and digest insects like odonates



© Thorpe S.E.



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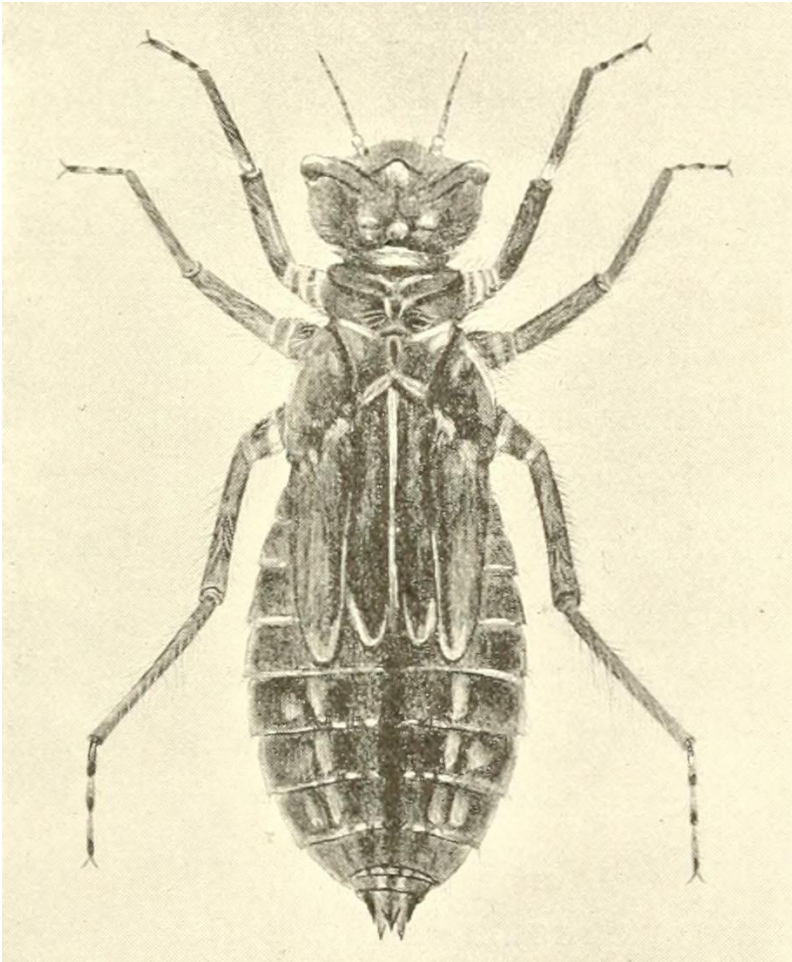


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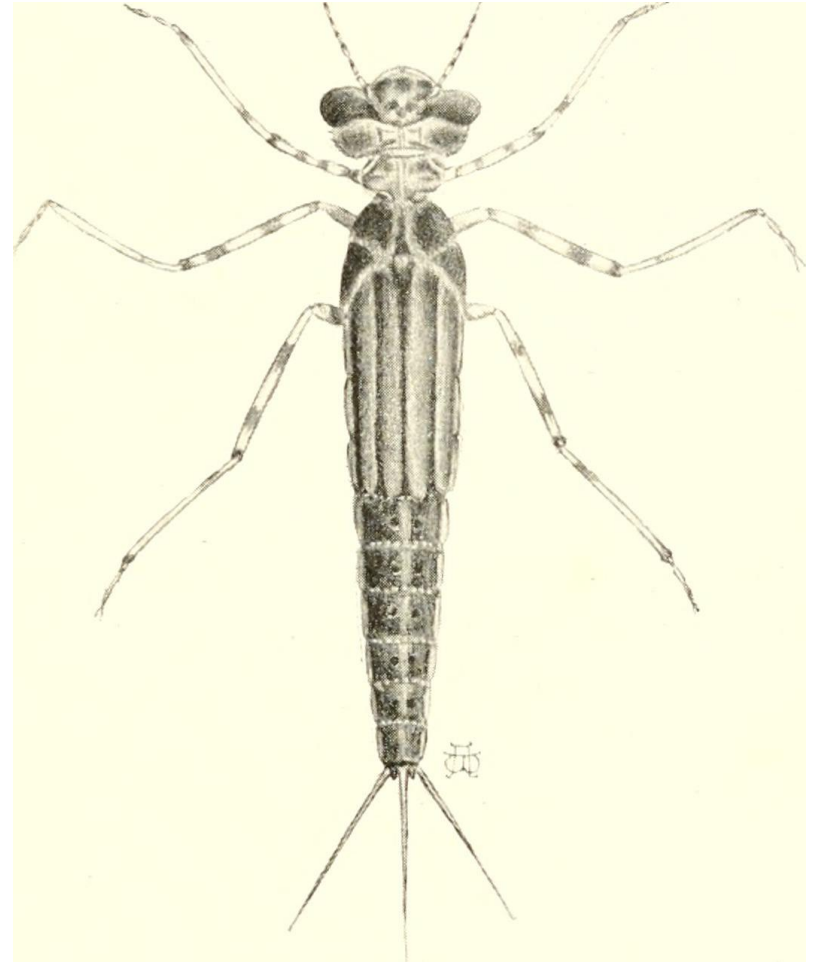
© Domenico Salvagnin

# Larva



© [Lucas, W. J.](#)

**Dragonfly**



© [Lucas, W. J.](#)

**Damselfly**



# Larval habitats - Freshwater ecosystems



© [Muhammed Sherif](#)

**Hill streams & waterfalls**



© [Balachand](#)

**Rivers**



© [Muhammed Sherif](#)

**Ponds**



© [Rodrigo Paredes](#)

**Swamps**



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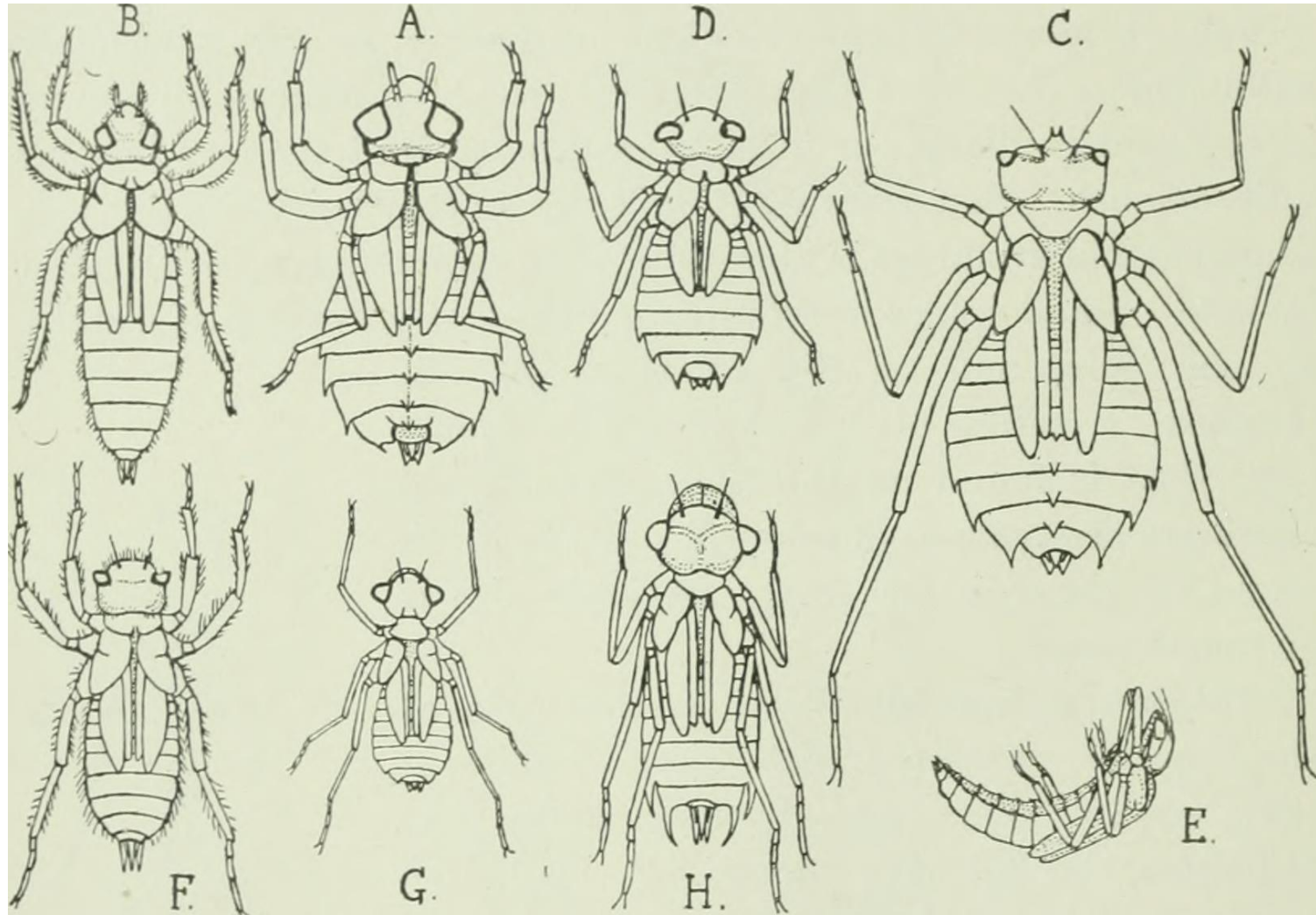
**Paddy fields**



© [Hermann Hammer](#)

**Phytotelmata**

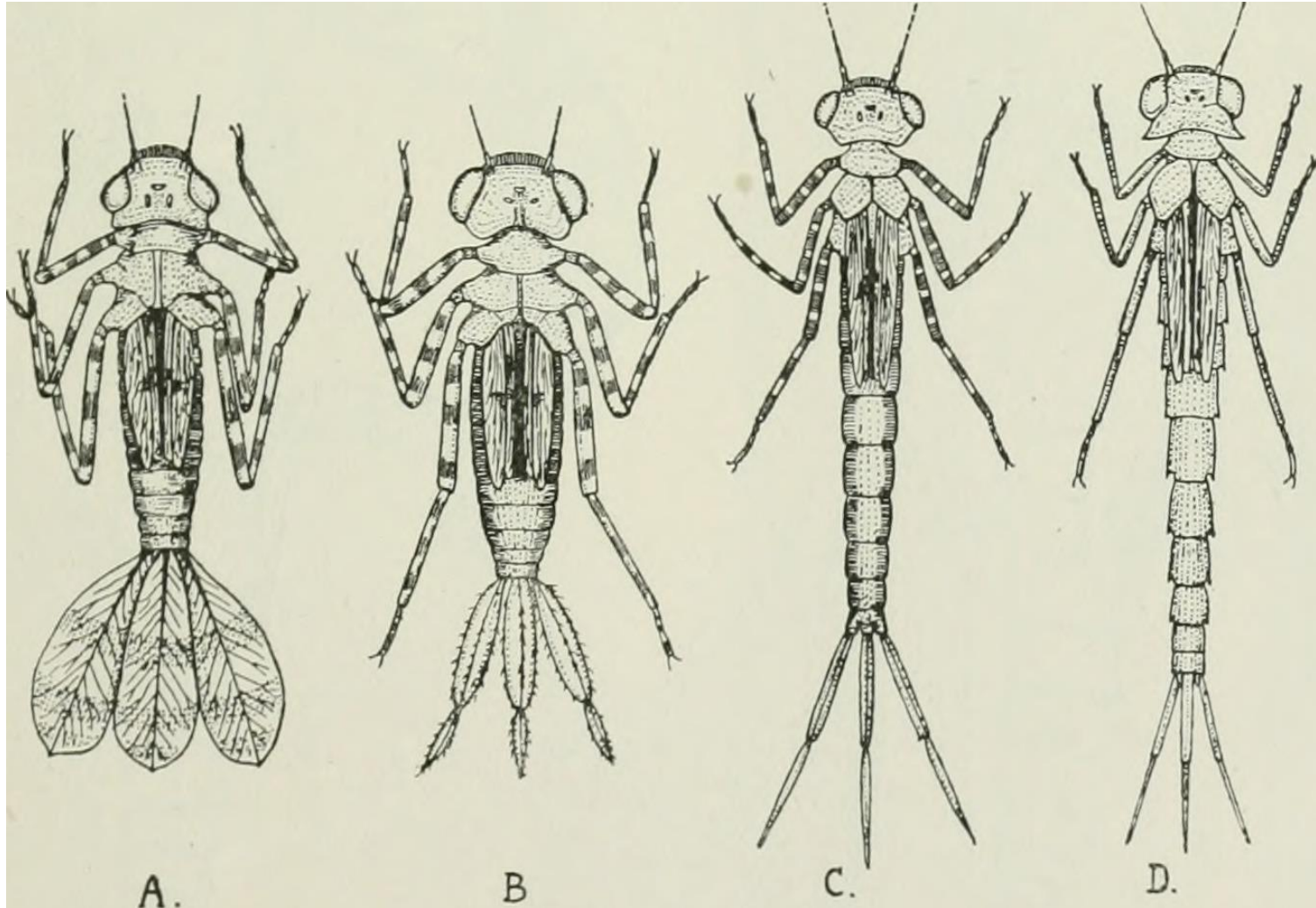
# Dragonfly larvae: Body shapes



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## Damselfly larvae: Body shapes



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# Some larvae in their habitats



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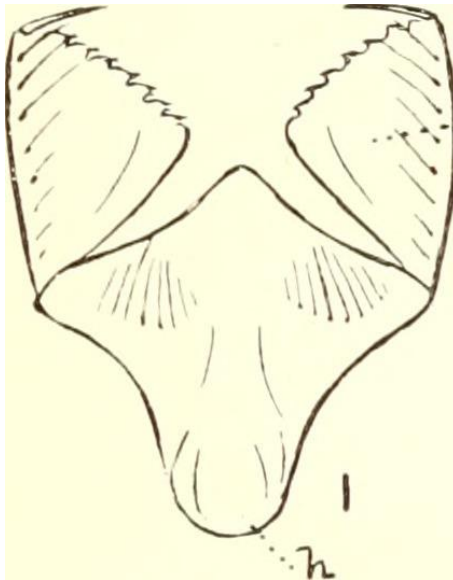
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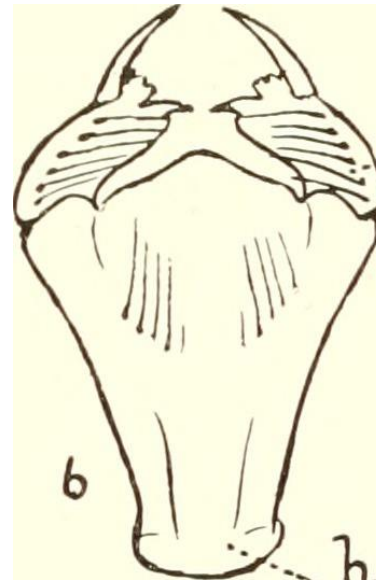
© [Balakrishnan Valappil](#)

# The labium of odonate larvae - A unique foraging organ

**They actively hunt fairly all sorts of aquatic invertebrates, such as aquatic insect larvae, small shrimps, tadpoles and small fish**



© Lucas, W. J.



# Significance

- ✓ Being predators both as larvae and adults, odonates play a significant role in the aquatic ecosystems
- ✓ Feed on mosquitoes and other insects which are harmful to humans
- ✓ Control insect pests in agricultural fields
- ✓ Important bio-indicators: Some dragonflies are very sensitive to pollution, so are indicators of water quality



© [Rison Thumboor](#)

***Euphaea fraseri***



© [Vengolis](#)

***Brachythemis contaminata***



# Threats

Threats to Freshwater ecosystems are threats to odonates too:

- ❖ Overexploitation
- ❖ Water pollution, sedimentation
- ❖ Flow modification, stream fragmentation
- ❖ Destruction and degradation of habitats
- ❖ Chemical and organic pollution, eutrophication
- ❖ Invasion by exotic species



# History of Odonate Studies

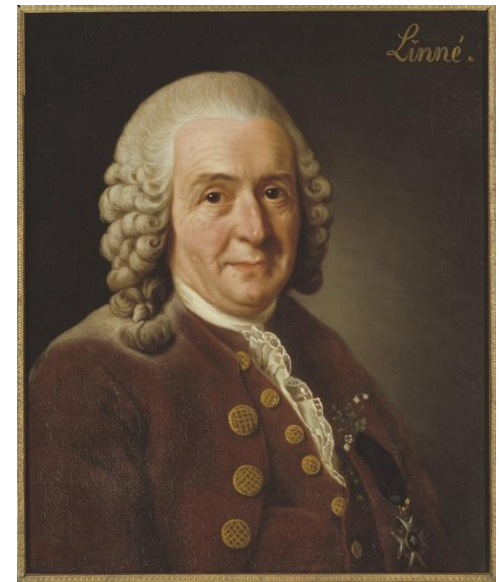
- Early Naturalists like **Conrad Gessner** and **Ulisse Aldrovandi** observed these insects in 16th century, but they thought those that lived in water and land were different organisms
- **Jan Swammerdam** noticed and illustrated the life cycle of these insects in 1669
- **Leeuwenhoek** observed ovipositing and how Embryos developed in the eggs in 1695
- **Carl Linnaeus** described a few species since 1758 under the genus ***Libellula*** in the order **Neuroptera**
- **Fabricius** established a new order **Odonata** for dragonflies in 1793
- **Drury** (1770-1773) described a few species
- **Rambur** (1842) described many species
- **Sély**s separated Odonata into Anisoptera (Dragonflies) and Zygoptera (Damselflies) in 1854 based on the difference in wings
- **Friedrich Ris** and **René Martin** completed the works initiated by **Sély**s
- **Laidlaw** (1914-1932) and **Fraser** (1918-1953) thoroughly studied Indian Odonata during the British Raj
- **Tillyard** well explained the morphology of odonata eggs, larvae and imagines through his book, *The Biology of Dragonflies: Odonata or Paraneuroptera* (1917)
- **Corbet** explained the behaviour of odonates through his works, including *Dragonflies: behaviour and ecology of Odonata* (1999) and *A Biology of Dragonflies* (1962)
- **Norman W. Moore** designed the *Dragonflies: Status Survey and Conservation Action Plan* for IUCN (1997)



**Jan Swammerdam  
(1637-1780)**



**Antonie van Leeuwenhoek  
(1632-1723)**



**Carl Linnaeus  
(1707-1778)**



**Johan Christian Fabricius  
(1745-1808)**



**Jules Pierre Rambur  
(1801-1870)**



**Edmond de Sélvs Longchamps  
(1813-1900)**



# Odonatology in India after independence

- Immediately after independence, people like Bhasin, Sahini, Singh and Baijal started contributing to the knowledge on Indian Odonata
- Asahina (1958-1995) conducted several studies on odonates from western and eastern Himalaya and described several new taxa
- Lieftinck (1960-1984) also significantly contributed to the Indian Odonata
- After this period, the scientists of Zoological Survey of India (ZSI) started surveying conservation areas, wetlands to document the odonate fauna
- Scientists like Kumar, Lahiri, Mitra, Prasad, Singh, Sinha, Srivastava, Ram, Kulkarni, Radhakrishnan, Emiliyamma, Babu, Gaurav Sharma, Supriya Nandy, Subramanian, Jafar and Talmale published fauna of many states and conservation areas
- Hämäläinen (1989-2013), Yeh and Veenakumari (2000) contributed to the knowledge on Indian Odonata
- Naturalists and scientific researchers including Francy Kakkassery, Abraham Samuel, Susanth Kumar, VC Balakrishnan, David Raju, Kiran C.G., Rison Thumboor, Ashish Tiple, Pankaj Koparde, Parag Rangnaker, Raymond Andrew, Shantanu Joshi and many others have contributed significantly to the growth of knowledge on Indian Odonata

# Odonata Diversity

❖ World

**6300+ species** (World Odonata List 2020)

❖ India

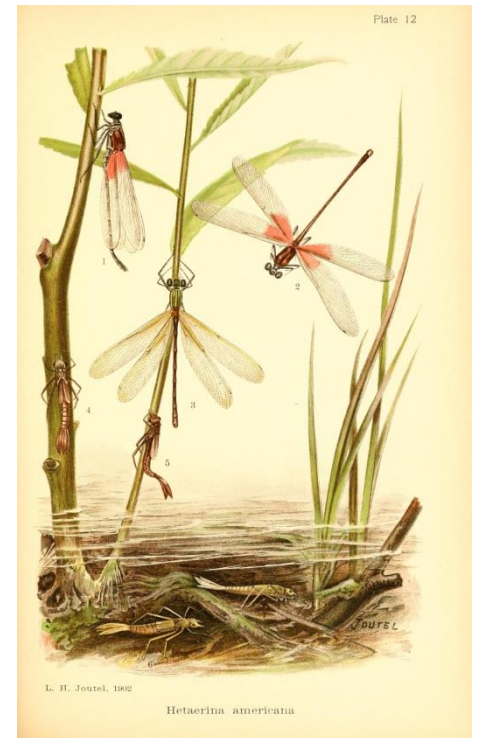
**493 species** (Subramanian & Babu 2020)

❖ Western Ghats

**196 species** (Subramanian & Babu 2020)

❖ Kerala

**175 species** (As of November 2020)



© J G Needham, E P Felt

# Damselfly Families (Suborder Zygoptera)



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**Lestidae (Spread-wings)**



© [Abraham Samuel](#)

**Platystictidae (Shadow damselfs)**



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**Calopterygidae (Broad-wings)**



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**Chlorocyphidae (Stream Jewels)**



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**Euphaeidae (Gossamer-wings)**



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**Platycnemididae (White-legs)**



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**Coenagrionidae (Narrow-wings)**

# Lestidae (Spread-wings)

(ചേരാച്ചിറകൻ തുമ്പികൾ)

- Most of them rest with their wings open, held at an angle away from their bodies
- Abdomen is long and slender
- The body usually has a greenish metallic shine; covered by pruinescence in adults
- Breed in marshes, ponds and rarely in running waters



© Jeevan Jose



# *Indolestes gracilis davenporti* (Fraser, 1930)

## കാട്ടു വിരിച്ചിറകൻ

- An exception in the family as it keeps the wings closed while resting
- Medium sized damselfly with brown-capped bluish eyes
- Thorax is black, marked with azure blue stripes
- The lower edge of the black stripe present on the thorax laterally is wavy
- Abdomen is azure blue on the sides, broadly black on dorsum up to the basal half of segment 9
- The apical half of segment 9 and whole of segment 10 are azure blue
- The azure blue parts are pale brown in young males without pruinescence





# *Indolestes gracilis davenporti* (Fraser, 1930)

കാട്ടു വിരിച്ചിറകൻ



# *Indolestes pulcherrimus* (Fraser, 1924)

## ചതുപ്പ് വിരിച്ചിറകൻ

- Medium sized damselfly with blue eyes which turn greenish below
- Prothorax brown with blue on sides
- Thorax is dark metallic green on dorsum with a narrow blue mid-dorsal stripe
- Sides of thorax blue, marked with a large black spot behind the lateral suture, followed by a smaller one in the middle
- Wings transparent with blackish brown pterostigma

♂

Last abdominal segments

- Abdomen is azure blue on the sides, marked with black on dorsum
- Mark on segment 2 looks like a thistle head
- Segment 8 is black; apical half of segment 9 and whole of segment 10 azure blue
- Superior anal appendages blue & curved inwards; tipped with brown



# *Indolestes pulcherrimus* (Fraser, 1924)

ചതുപ്പ് വിരിച്ചിറകൻ



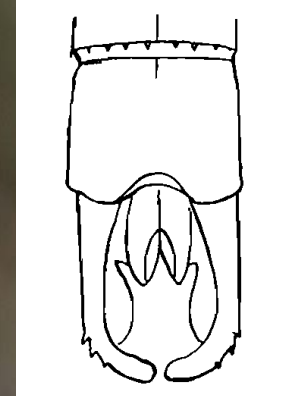
- Female is almost completely olivaceous brown in colour
- Dark markings on thorax similar to male

# *Lestes concinnus* Hagen in Selys, 1862

തവിടൻ ചേരാച്ചിറകൻ

•*Lestes umbrinus* is a junior synonym

♂



Male anal appendages- dorsal view

- Medium sized damselfly with brown-capped yellowish eyes
- Thorax and abdomen are brown, paler on the sides
- Anal appendages are white



# *Lestes concinnus* Hagen in Selys, 1862

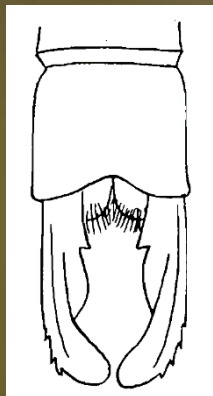
തവിടൻ ചേരാച്ചിറകൻ



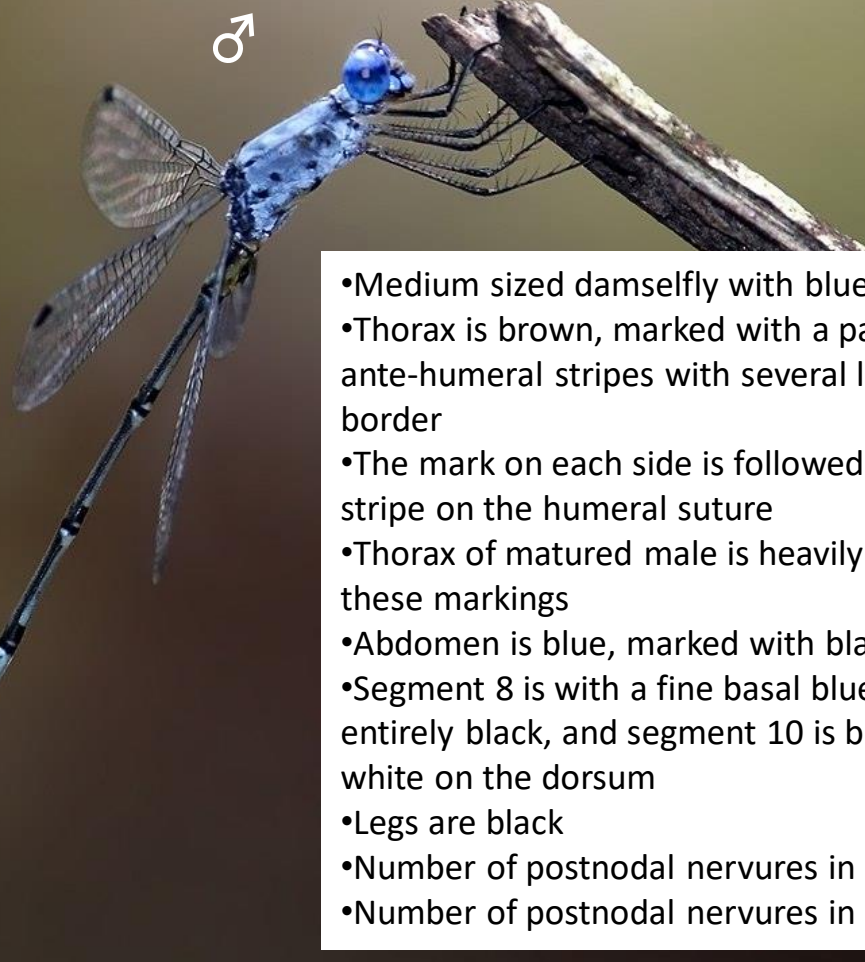
© [John Sim](#)

# *Lestes dorothea* Fraser, 1924

കാട്ടു ചേരാച്ചിറകൻ



Male anal appendages- dorsal view



- Medium sized damselfly with blue eyes
- Thorax is brown, marked with a pair of metallic green ante-humeral stripes with several lobes in their outer border
- The mark on each side is followed by another diffuse black stripe on the humeral suture
- Thorax of matured male is heavily pruinose, obscuring all these markings
- Abdomen is blue, marked with black
- Segment 8 is with a fine basal blue ring, segment 9 entirely black, and segment 10 is black with pruinose white on the dorsum
- Legs are black
- Number of postnodal nervures in forewings= 15-16
- Number of postnodal nervures in hindwings= 14-15

# *Lestes dorothea* Fraser, 1924

## കാട്ടു ചേരാച്ചിറകൻ

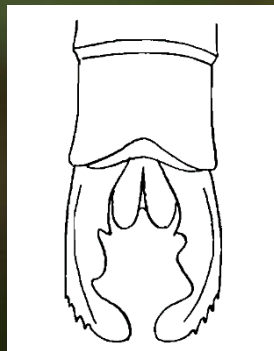
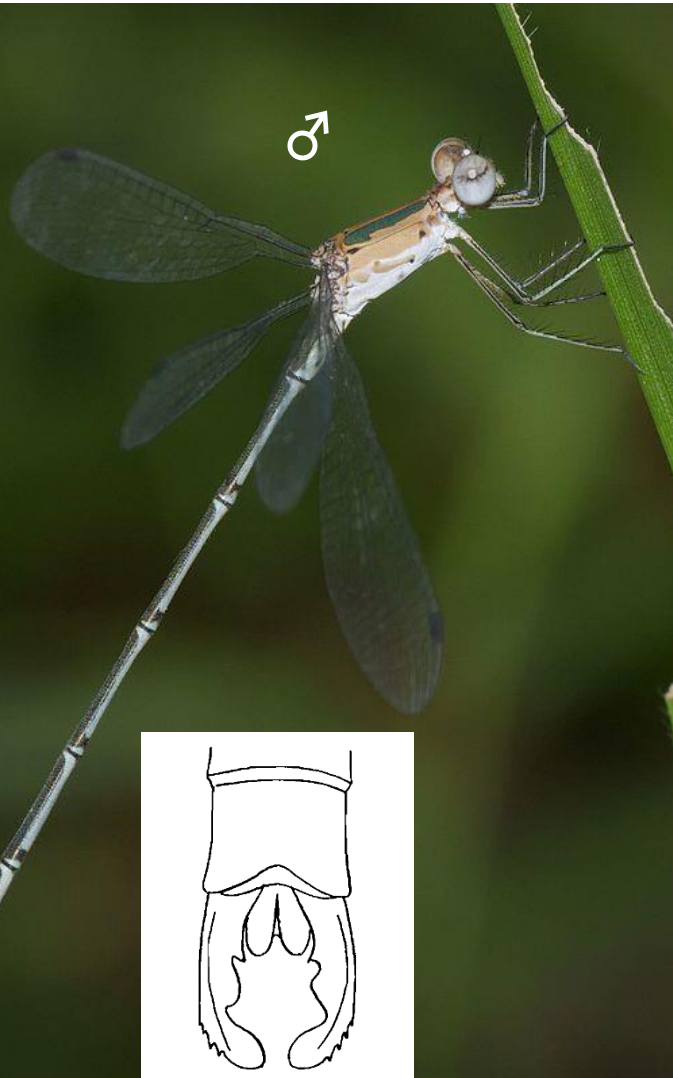
- Female has greenish eyes
- Thorax is olivaceous green, pale greenish yellow laterally.
- The markings are broader and more visible compared to the males





# *Lestes elatus* Hagen in Selys, 1862

പച്ച ചേരാച്ചിറകൻ



Male anal appendages- dorsal view

- Medium sized damselfly with brown capped blue eyes
- Thorax is reddish brown, marked with a pair of narrow ante-humeral metallic green stripes expanded outwardly at the abdominal end like a hockey stick
- The thorax of matured males are heavily pruinose with blue on the sides
- Abdomen is pale brown at the sides, marked broadly on dorsum with metallic green, up to segment 8
- The basal half of segment 9 is black and the apical half is yellowish brown. Segment 10 is yellowish brown
- The yellowish-brown colour of the abdomen will change to bluish-white due to pruinescence in the adults



# *Lestes elatus* Hagen in Selys, 1862

പച്ച ചേരാച്ചിറകൻ

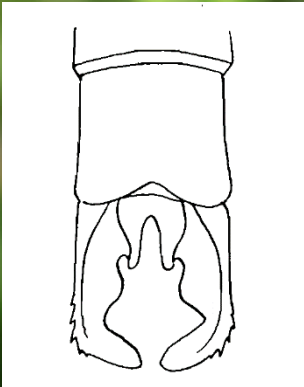


# *Lestes malabaricus* Fraser, 1929

മലബാർ ചേരാച്ചിറകൻ



- Spreading damselfly very similar to *Lestes elatus*, but smaller
- Eyes and face turquoise blue
- Thorax with dorsum bright metallic green in teneral and early adults, antehumeral stripes bright metallic reddish-brown which are slightly or not at all expanded in outer part
- Adults appear fully black due to pruinescence
- Wingspots longer than in *L. elatus*, covering 2 cells
- Superior anal appendages turn inwards sharply



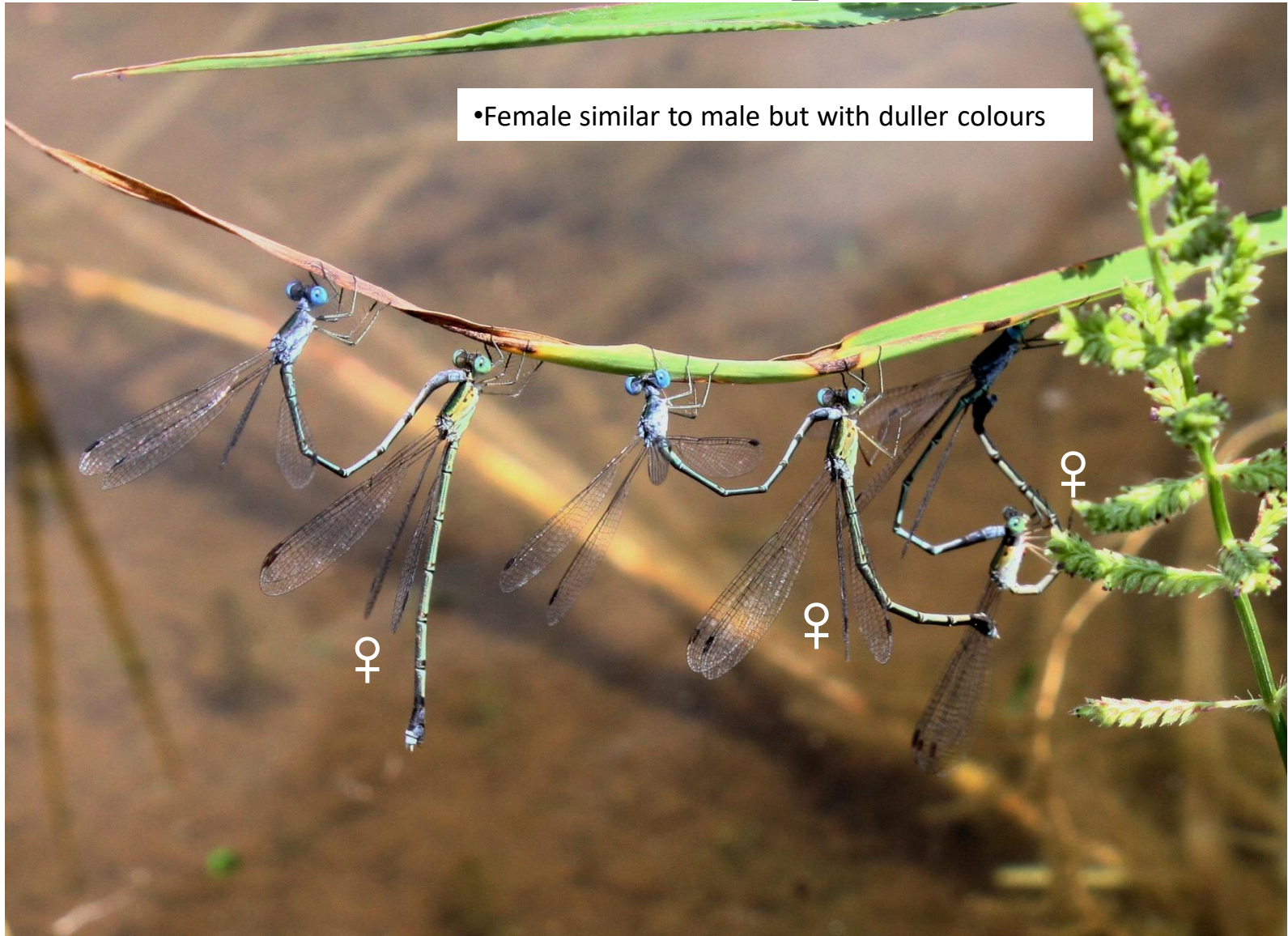
Male anal appendages- dorsal view



# *Lestes malabaricus* Fraser, 1929

മലബാർ ചേരാച്ചിറകൻ

•Female similar to male but with duller colours



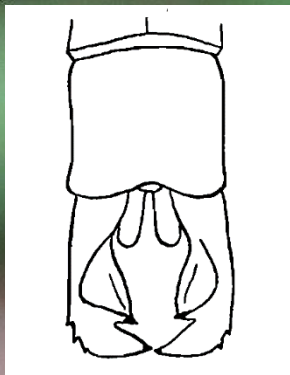
© Muhammed Haneef

# *Lestes nodalis* Selys, 1891

പുള്ളി വിരിച്ചിറകൻ



♂



Male anal appendages- dorsal view

- Medium sized damselfly with brown eyes, bluish in adults
- Thorax is brown, paler on the sides
- Abdomen is brown with black apical annules up to segment 6; segments 7 and 8 are dark brown
- Segments 9, 10 and anal appendages are pale, bluish when aged.
- The pale colours on the thorax and abdomen also turn bluish due to pruinescence when aged
- Wings are transparent with longitudinally bi-coloured pterostigma, blackish-brown at centre and yellow along the sides



# *Lestes nodalis* Selys, 1891

പുള്ളി വിരിച്ചിറകൻ

•Female similar to male, differing only in sexual characters



# *Lestes patricia* Fraser, 1924

## കരിവരയൻ ചേരാച്ചിറകൻ

- Relatively large spreadwing damselfly with bright blue eyes
- Thorax without metallic markings, but with a broad black dorsal stripe bordered by a greyish-green stripe on either side
- Wingspots dark brown, about four times as long as broad
- Superior anal appendages black, turning inwards almost at right angles at apices; inferior anal appendages short, extending nearly to the end of expanded part of superiors



Male anal appendages- dorsal view

© Shriram Bhakare

# *Lestes patricia* Fraser, 1924

കരിവരയൻ ചേരാച്ചിറകൻ



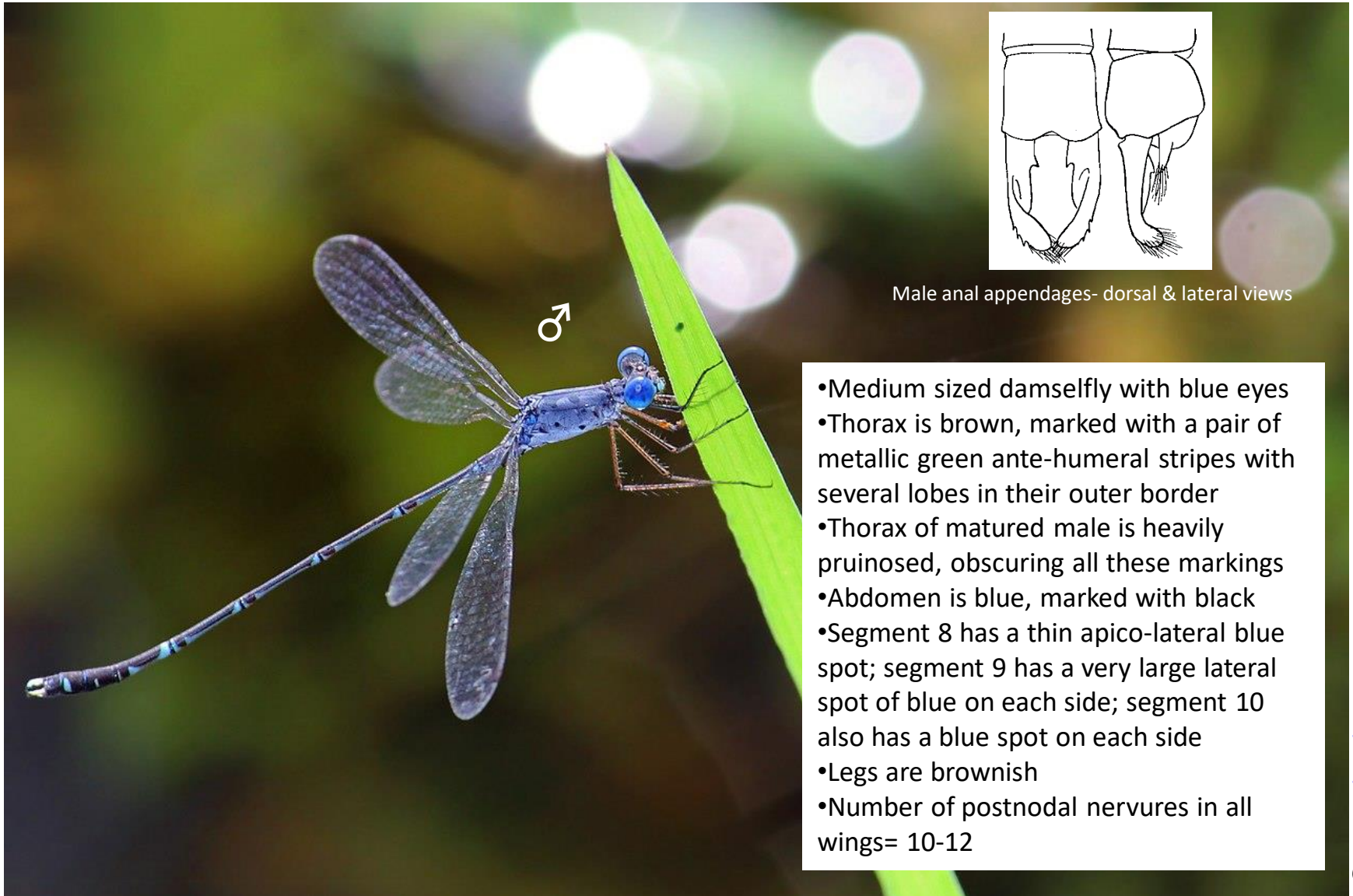
•Female similar to male, differing only in sexual characters

© Shriram Bhakare



# *Lestes praemorsus* Hagen in Selys, 1862

നീലക്കണ്ണി ചേരാച്ചിറകൻ

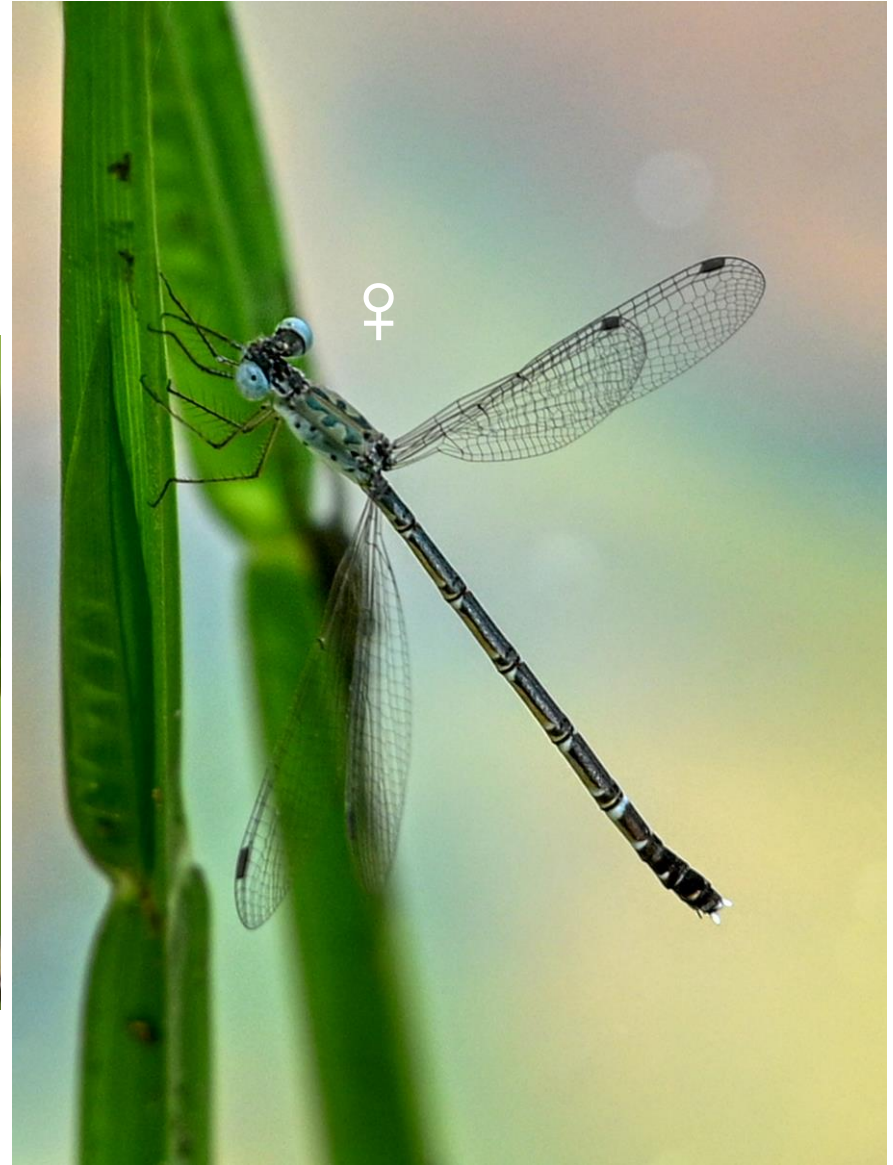




# *Lestes praemorsus* Hagen in Selys, 1862

നീലക്കണ്ണി ചേരാച്ചിറകൻ

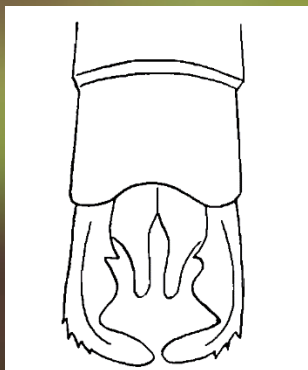
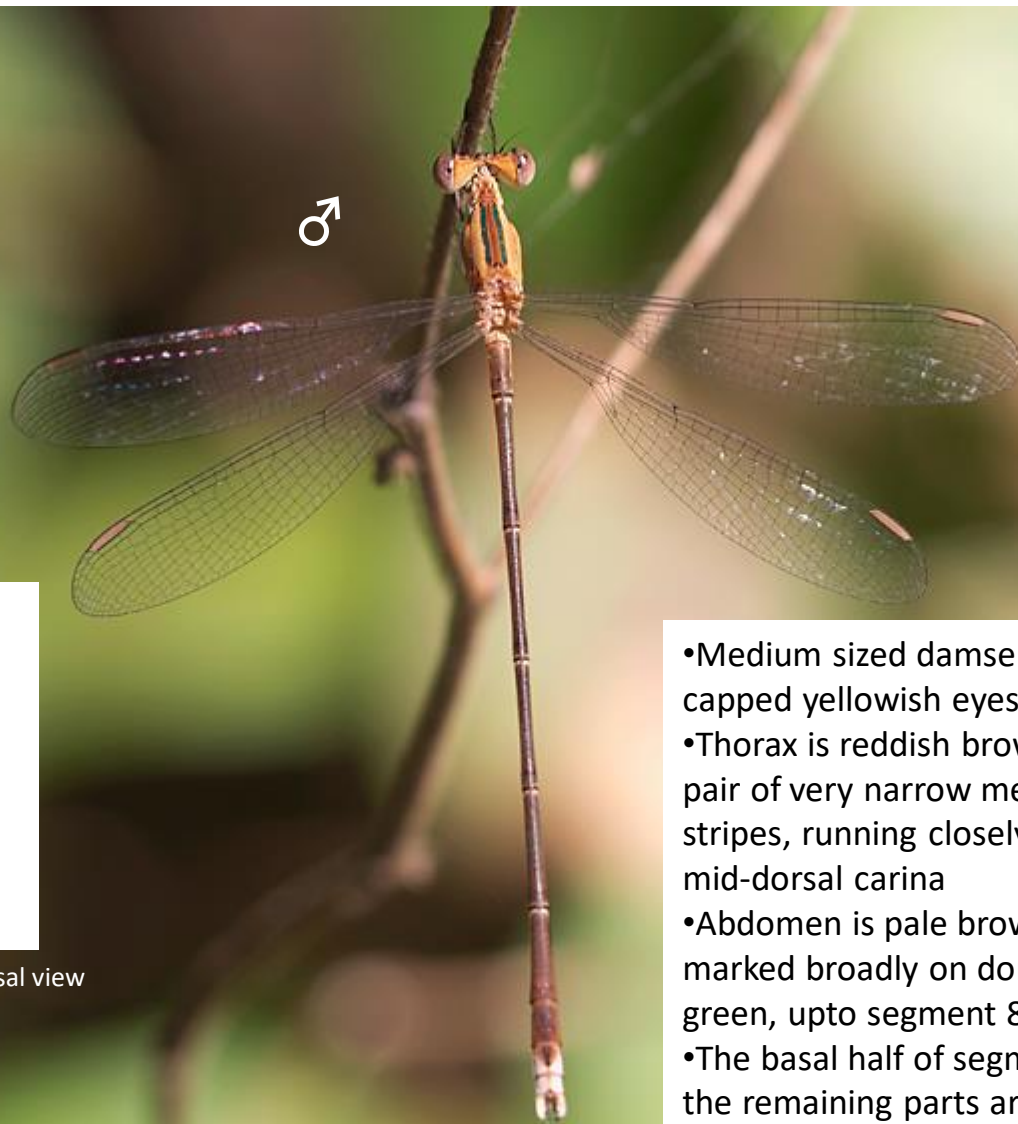
- Female has greenish eyes
- Thorax is brown, chalky white at lateral base
- The markings are more visible compared to the male



© Reji Chandran

# *Lestes viridulus* Rambur, 1842

പച്ചവരയൻ ചേരാച്ചിറകൻ



Male anal appendages- dorsal view

- Medium sized damselfly with brown capped yellowish eyes
- Thorax is reddish brown, marked with a pair of very narrow metallic green stripes, running closely parallel to the mid-dorsal carina
- Abdomen is pale brown at the sides , marked broadly on dorsum with metallic green, upto segment 8
- The basal half of segment 9 is black and the remaining parts are yellowish brown

© Pranad Patil, 2014

© Pranad Patil

# *Lestes viridulus* Rambur, 1842

പച്ചവരയൻ ചേരാച്ചിറകൻ





# *Platylestes kirani* Emiliyamma, Palot & Charesh, 2020

## കിരണി ചേരാച്ചിറകൻ

- Medium sized damselfly with apple green eyes
- Prothorax and thorax yellowish-green, paler at the sides
- Thorax with many black spots and a broad black stripe on the dorsum, straight on the inner border, outwardly expanded at three points
- Pterostigma dark, short and broad, having creamy yellow inner and outer ends
- Abdomen warm reddish brown in colour with black apical rings on each segment
- Anal appendages: Whitish; apex of superiors blunt and rounded. Inferiors about half the length of superiors



© Rison Thumboor, K.G. Emiliyamma & C. Charesh

# *Platylestes kirani* Emiliyamma, Palot & Charesh, 2020

## കിരണി ചേരാച്ചിറകൻ



- Female does not have the black thoracic stripe of the male, only multiple black spots
- Darker pterostigma with creamy yellow outer and inner ends help to separate it from female *P.platystylus*

# *Platylestes platystylus* (Rambur, 1842)

പച്ചക്കണ്ണൻ ചേരാച്ചിറകൻ



Dorsal view of anal appendages



- Medium sized damselfly with green eyes
- Thorax is pale brown, paler at the sides, marked with a large number of black spots
- Adults have a greenish white pruinescence
- Abdominal segments 2 to 7 are reddish brown above and olivaceous on the lower sides, marked with black apical rings
- Remaining segments are black, marked with yellow
- Pterostigma short and broad having white inner and outer ends



# *Platylestes platystylus* (Rambur, 1842)

പച്ചക്കണ്ണൻ ചേരാച്ചിറകൻ



•Female similar to male,  
differing only in sexual  
characters

# Platystictidae (Shadow damselflies)

(നിഴൽത്തുമ്പികൾ)

- Slender black or brown damselflies marked with white or blue
- Abdomen is very long and twice or more than twice the length of the hindwings
- Live in dense forests in the tropics where they are found near small streams
- Do not disperse far from their habitat
- Breed only in slow-flowing forest streams



© Jeevan Jose



# *Indosticta deccanensis* (Laidlaw, 1915)

## കുങ്കുമ നിഴൽത്തുമ്പി

- Medium sized damselfly with bluish-white face and black-capped brown eyes
- Thorax is cinnamon brown with a black mid-dorsal carina
- Abdomen is dark-brown up to segment 7; segments 8 & 9 are azure blue bordered below with black





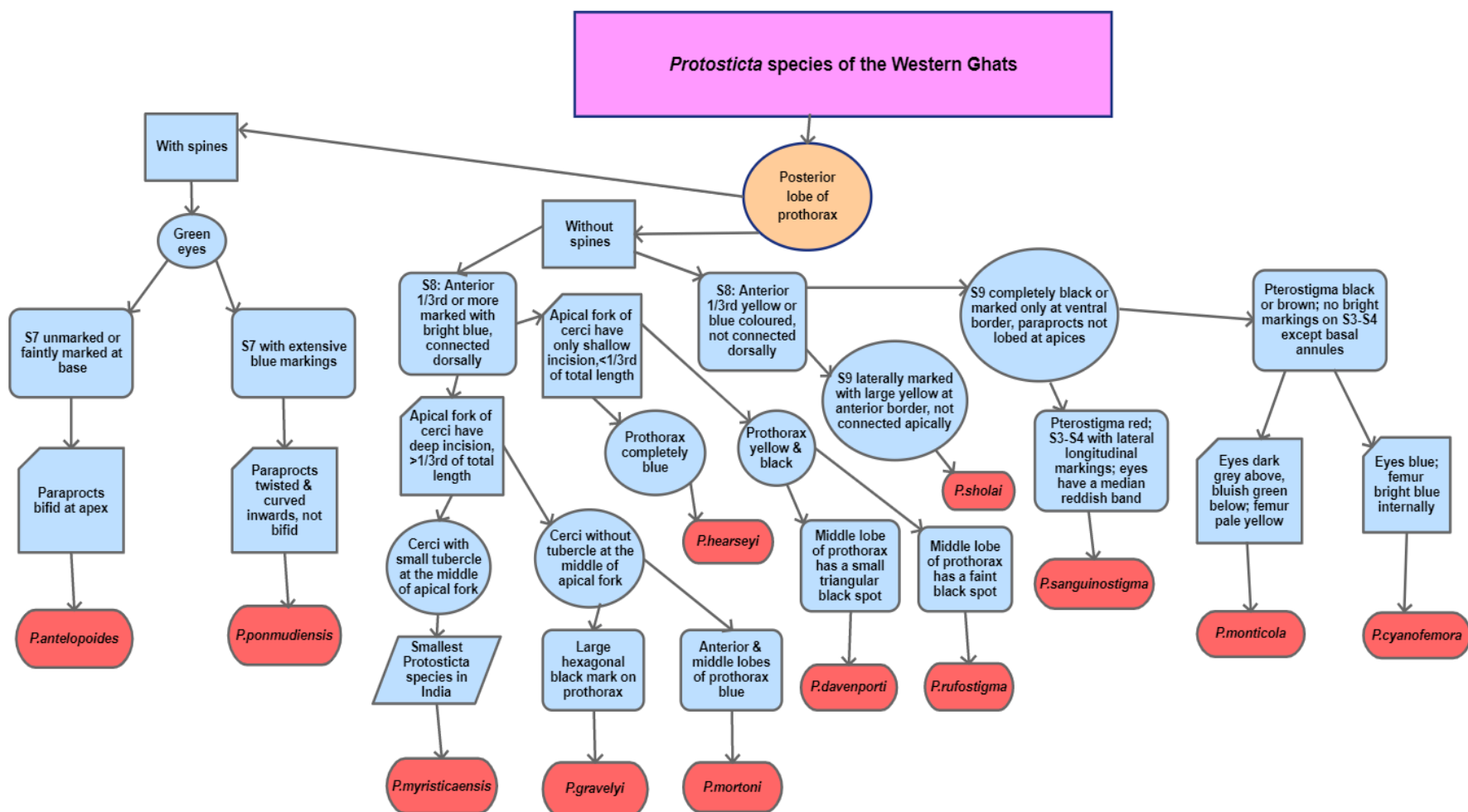
# *Indosticta deccanensis* (Laidlaw, 1915)

## കുങ്കുമ നിഴൽത്തുമ്പി

- Female thorax is of the same colour, but has dark patches in the dorsum and the sides
- There is a narrow ante-humeral pale blue stripe and another similar blue stripe bordering the black area on the side
- Abdomen is similar to the male; but segment 8 unmarked and segment 9 with a large oval pale blue dorso-lateral spot

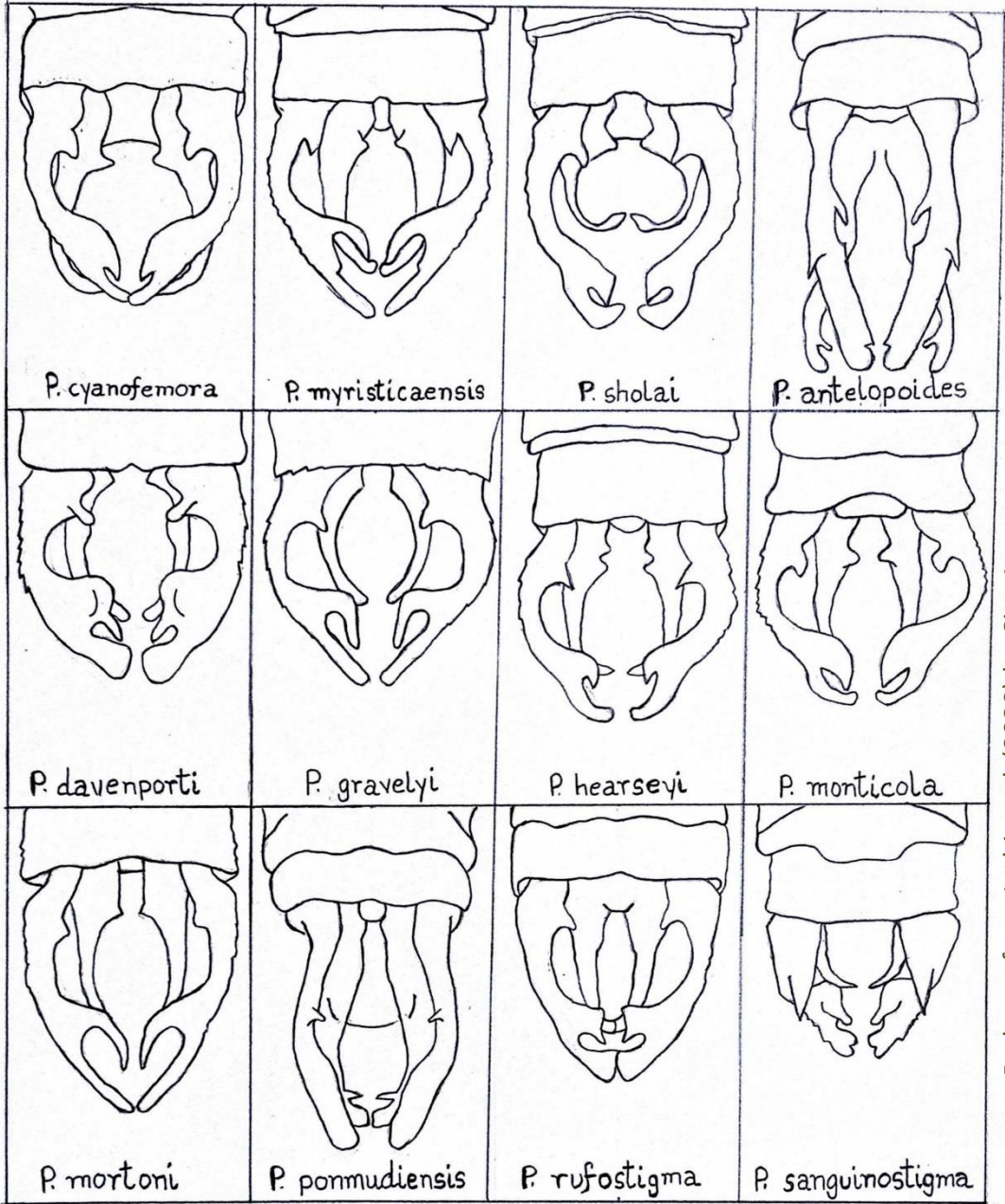
♀





Reference: Joshi, S., Subramanian, K. A., Babu, R., Sawant, D., Kunte, K. (2020). Three new species of *Protosticta* Selys, 1885 (Odonata: Zygoptera: Platystictidae) from the Western Ghats, India, with taxonomic notes on *P. mortoni* Fraser, 1922 and rediscovery of *P. rufostigma* Kimmins, 1958. *Zootaxa*: 4858 (2): 151–185

# *Protosticta* species of the Western Ghats: Dorsal view of male anal appendages

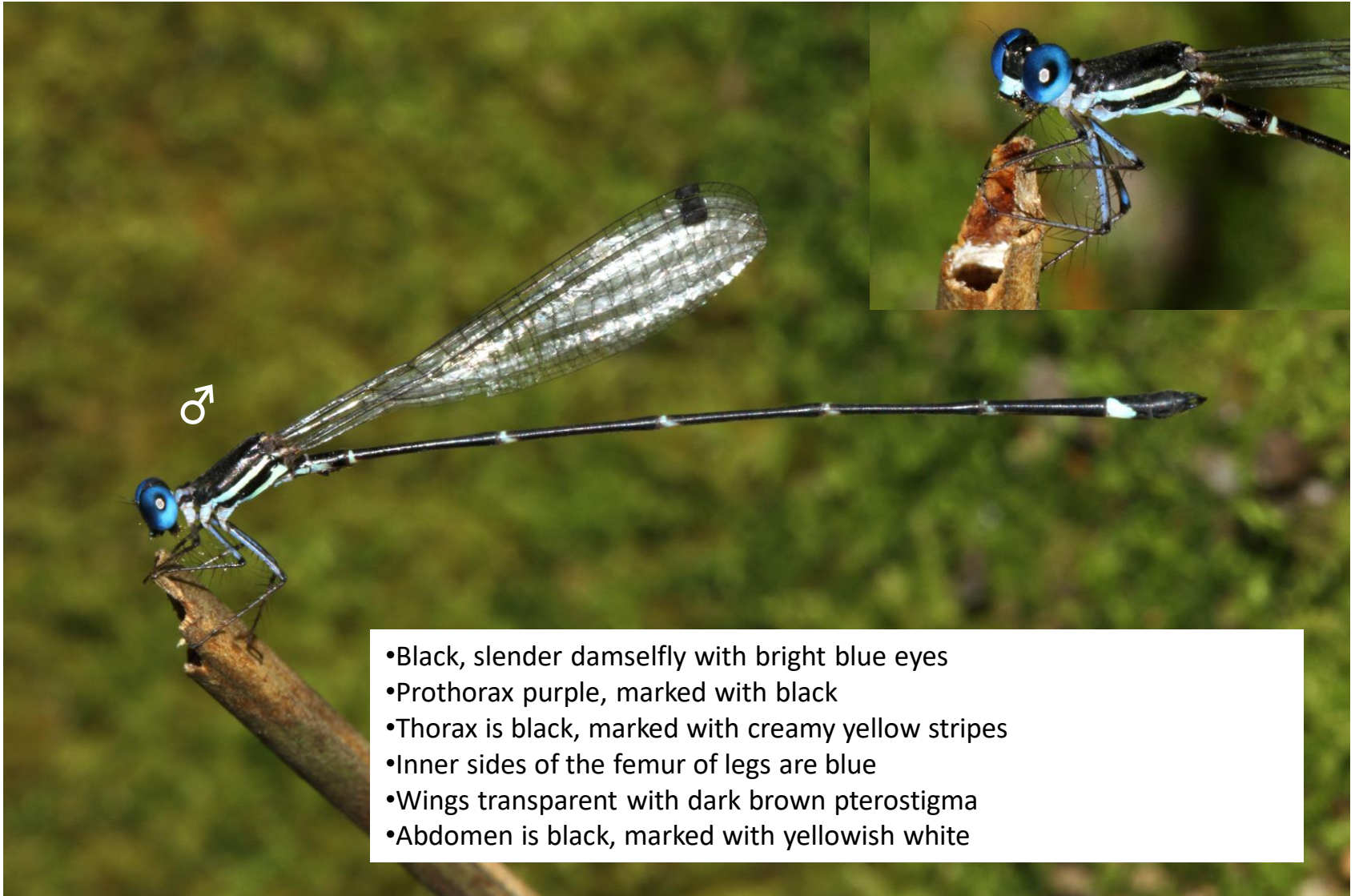


Redrawn from Joshi et al. (2020) by Cicy Ann



# *Protosticta cyanofemora* Joshi et al., 2020

നീലക്കാലി നിഴൽത്തുമ്പി



- Black, slender damselfly with bright blue eyes
- Prothorax purple, marked with black
- Thorax is black, marked with creamy yellow stripes
- Inner sides of the femur of legs are blue
- Wings transparent with dark brown pterostigma
- Abdomen is black, marked with yellowish white

# *Protosticta cyanofemora* Joshi et al., 2020

നീലക്കാലി നിഴൽത്തുമ്പി



•Female similar to the male, but shorter and more robustly built

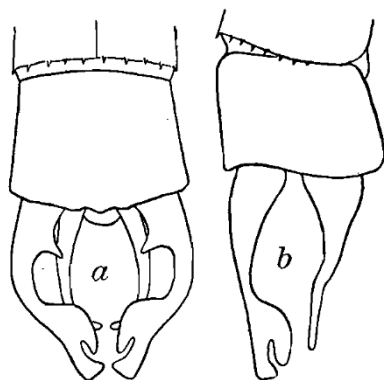
© David V Raju



# *Protosticta davenporti* Fraser, 1931

## ആനമല നിഴൽത്തുമ്പി

- Long, slender damselfly with bottle-green eyes
- Thorax is glossy black, marked with broad bluish-white stripes
- Abdomen is black, marked with white basal annules up to segment 7
- Segment 8 is with its basal third or half turquoise-blue, expanding gradually to the apex laterally, not divided on the mid-dorsum as in *Protosticta gravelyi*
- Segments 9 and 10 are unmarked
- Apex of each superior appendage has a “finger and thumb” structure
- Inferior appendages lack any spine or tooth
- Robust and stouter compared to *Protosticta gravelyi*
- Female is very similar to the male, but shorter and more robustly built



—Anal appendages of *Protosticta davenporti* Fras., male.  
a. Dorsal view. b. Right lateral view.



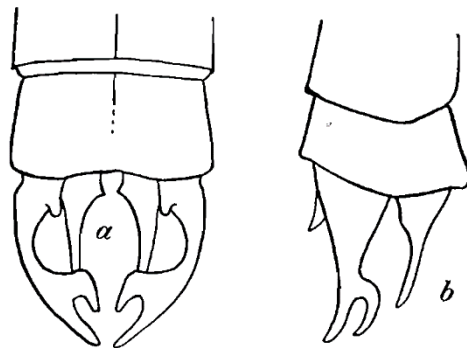
© Balachandran V



# *Protosticta gravelyi* Laidlaw, 1915

## പുള്ളി നിഴൽത്തുമ്പി

- Long, slender damselfly with dark eyes
- Prothorax has a black hexagonal mark
- Thorax is glossy black, marked with broad creamy-white stripes
- Abdomen is black, marked with broad white basal annules up to segment 7
- Segment 8 is with its basal half turquoise-blue, expanding gradually to the apex laterally
- There is a narrow black mid-dorsal carina on segment 8
- Segments 9 and 10 are unmarked
- Apex of each superior appendage has a “finger and thumb” structure
- Inferior appendages each furnished with an inner stout spine at base



—Anal appendages of *Protosticta gravelyi* Laid., male.  
a. Dorsal view. b. Right lateral view.



# *Protosticta gravelyi* Laidlaw, 1915

പുള്ളി നിഴൽത്തുമ്പി

- Female is very similar to the male, but shorter and more robustly built
- Segment 8 is black with a large white spot at the base of each side

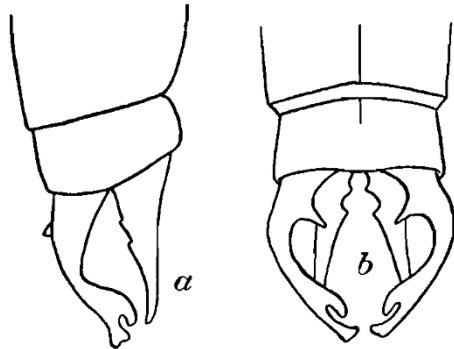


© Jeevan Jose

# *Protosticta hearseyi* Fraser, 1922

## ചെറു നിഴൽത്തുമ്പി

- Small, slender damselfly with blue eyes
- Prothorax light blue
- Thorax is brownish black, marked with bluish-white stripes
- Abdomen is brownish black, marked with pale blue basal annules up to segment 7
- Segment 8 is turquoise-blue with a narrow black apical annule; segments 9 and 10 are black, unmarked
- Female is similar to the male; approximately of the same length but more robust in build



—Anal appendages of *Protosticta hearseyi* Fras., male.  
a. Right lateral view. b. Dorsal view.





# *Protosticta monticola* Emiliyamma & Palot, 2016

മാമല നിഴൽത്തുമ്പി



- Long, slender damselfly with eyes greyish-black above and pale bluish-green below
- Thorax is glossy black, marked with broad bright yellow stripes
- Abdomen is metallic black, marked with yellow basal annules up to segment 8
- Segment 8 is black with lateral and ventral sides yellow
- Ventral side of segment 9 is yellow
- Dorsum of abdomen is distinctly plain black without any marking
- Female similar to the male, but shorter and stouter



# *Protosticta ponmudiensis* Kiran, Kalesh & Kunte, 2015

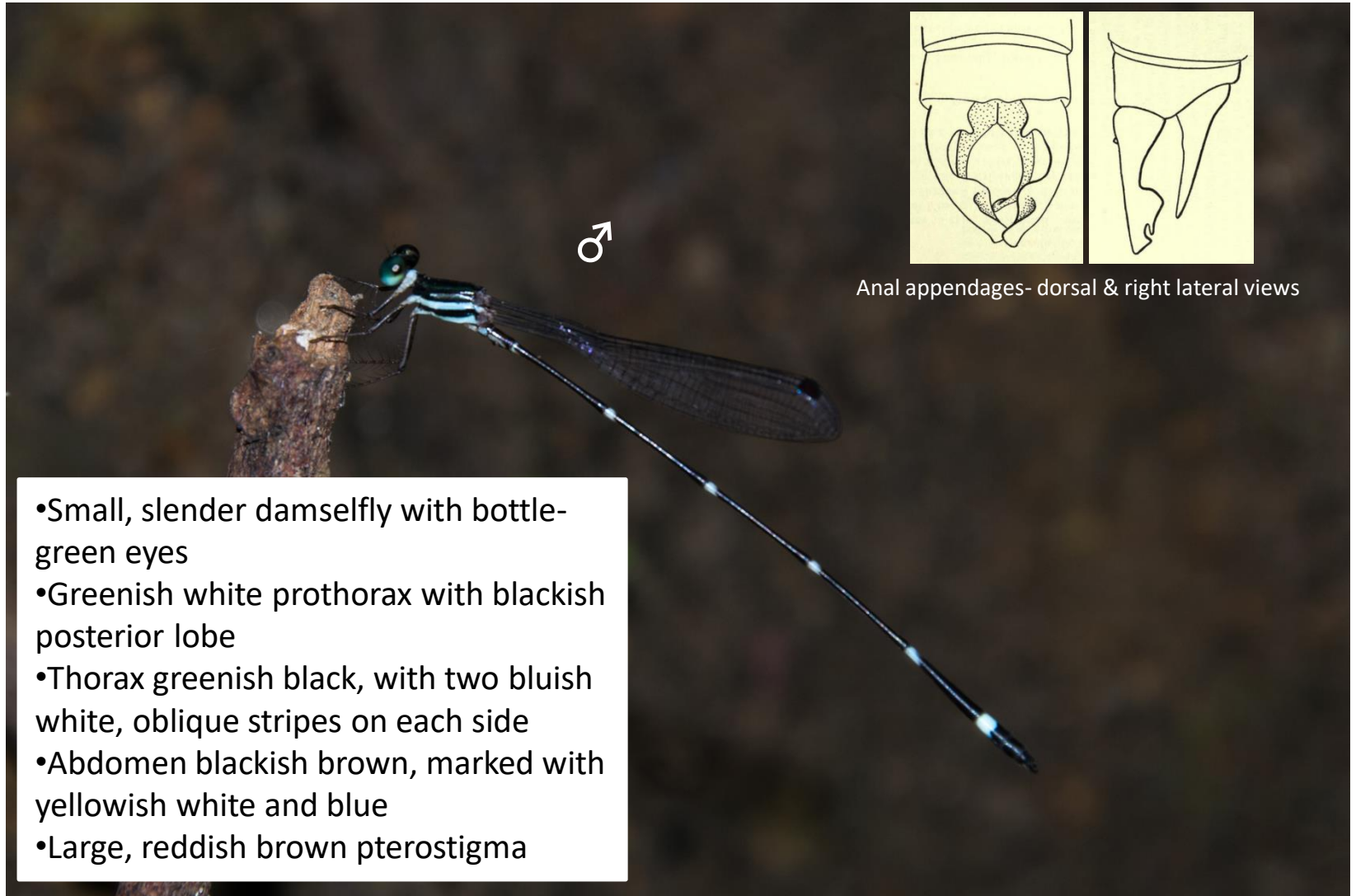
പൊന്മുടി നിഴൽത്തുമ്പി

- Long, slender damselfly with bright green eyes
- Thorax is glossy black, marked with broad creamy-white stripes
- Abdomen is black, marked with white basal annules upto segment 6
- There is a broad bluish-white basal annule on segment 7
- Segment 8 has a narrow basal annule; segments 9 and 10 are unmarked



# *Protosticta rufostigma* Kimmins, 1958

അഗസ്ത്യമല നിഴൽത്തുമ്പി



Anal appendages- dorsal & right lateral views

- Small, slender damselfly with bottle-green eyes
- Greenish white prothorax with blackish posterior lobe
- Thorax greenish black, with two bluish white, oblique stripes on each side
- Abdomen blackish brown, marked with yellowish white and blue
- Large, reddish brown pterostigma



# *Protosticta rufostigma* Kimmins, 1958

അഗസ്ത്യമല നിഴൽത്തുമ്പി

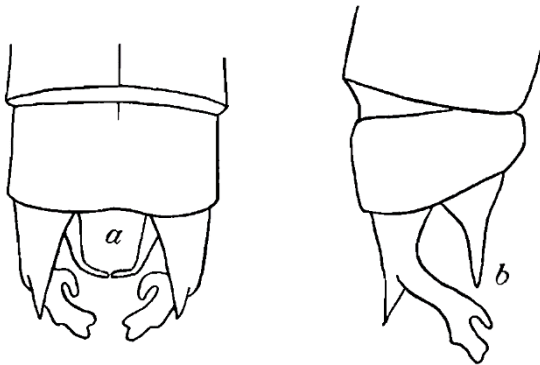


•Female similar to male, differing only in sexual characters

# *Protosticta sanguinostigma* Fraser, 1922

## ചമ്പൻ നിഴൽത്തുമ്പി

- Small, slender damselfly with eyes bottle-green above and pale green below separated by an equatorial band of reddish-brown
- Thorax is glossy bronze-black, marked with bluish-white stripes
- Wings are transparent with blood-red pterostigma
- Abdomen is brownish black, marked with white basal annules up to segment 7
- Segment 8 is turquoise-blue with narrow black apical annule
- Segments 9 and 10 are black, unmarked



—Anal appendages of *Protosticta sanguinostigma* Fras., male.  
a. Dorsal view. b. Right lateral view.





# *Protosticta sanguinostigma* Fraser, 1922

ചെമ്പൻ നിഴൽത്തുമ്പി



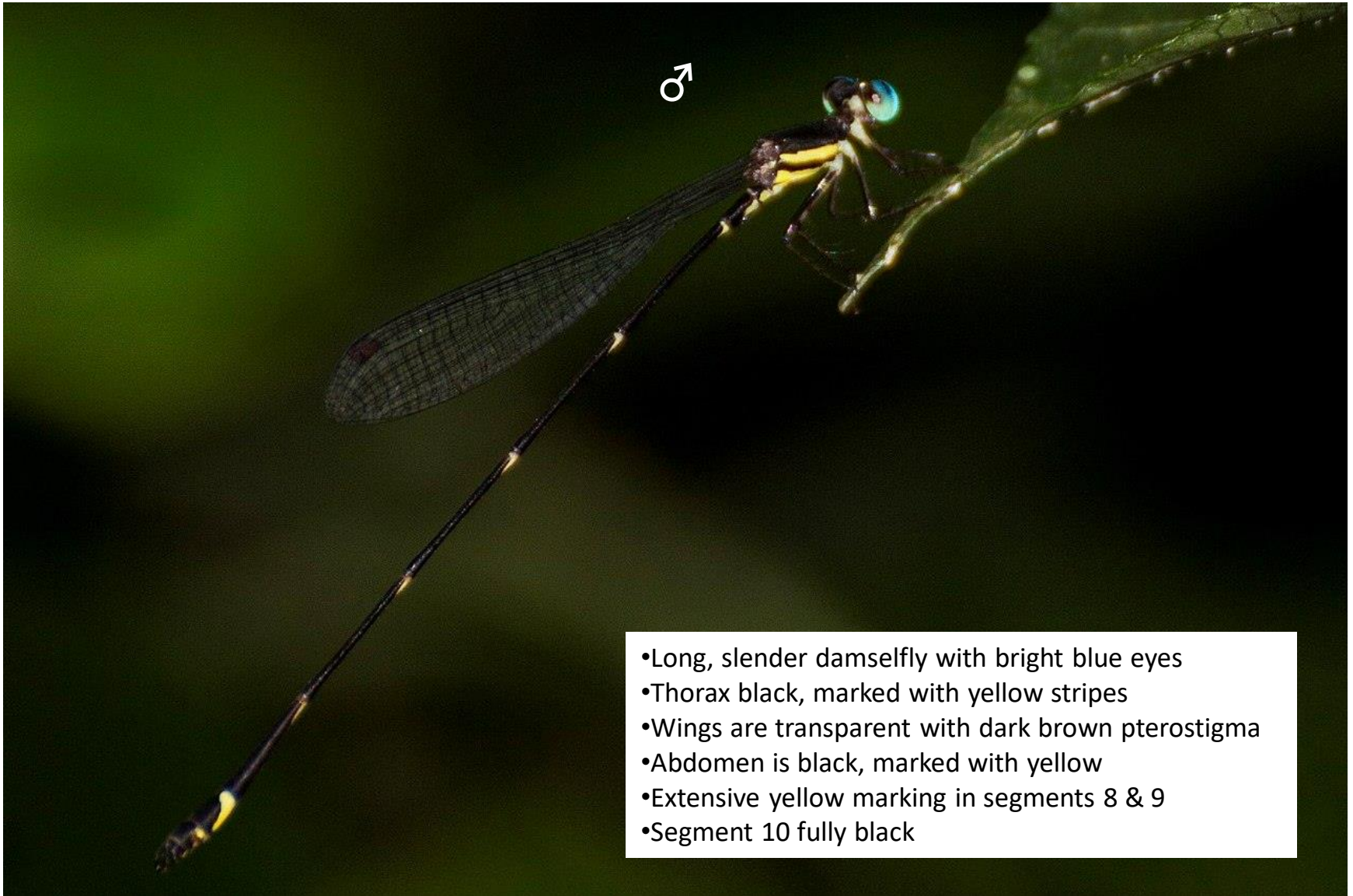
•Female similar to male; differing only in sexual characters

© Reji Chandran



# *Protosticta sholai* Subramanian & Babu, 2020

ചോല നിഴൽത്തുമ്പി

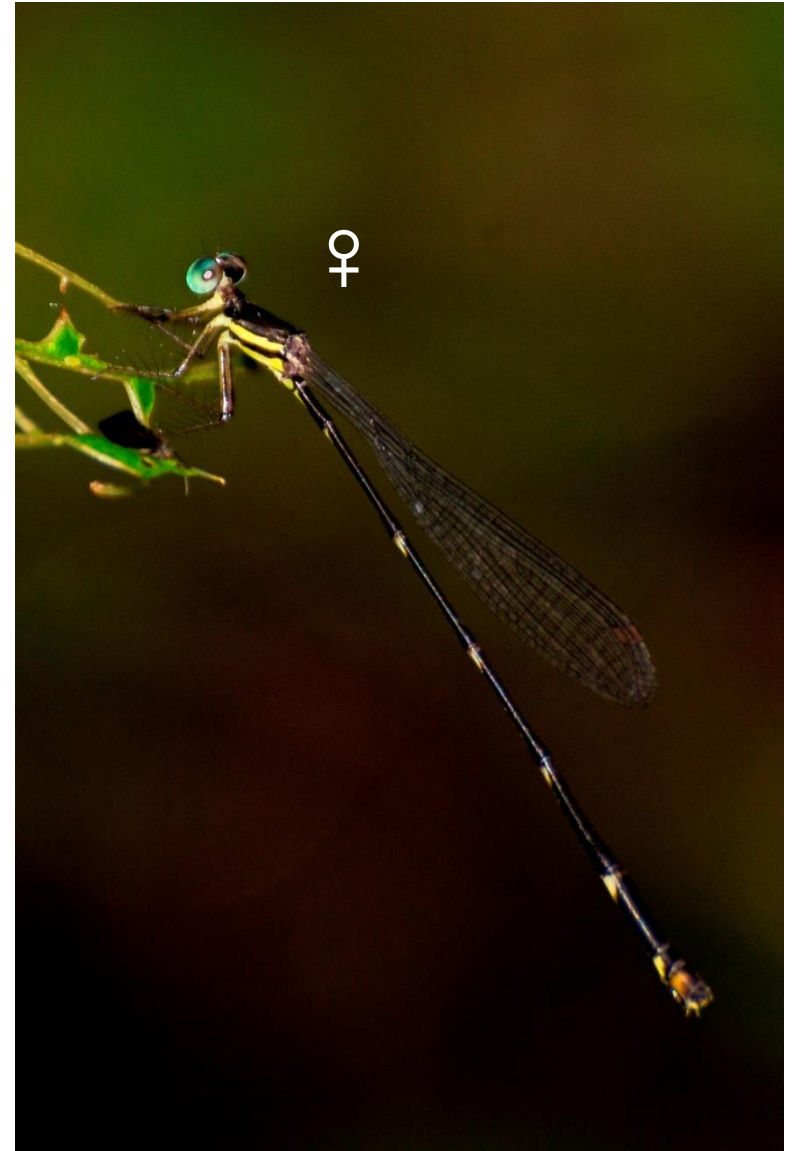


- Long, slender damselfly with bright blue eyes
- Thorax black, marked with yellow stripes
- Wings are transparent with dark brown pterostigma
- Abdomen is black, marked with yellow
- Extensive yellow marking in segments 8 & 9
- Segment 10 fully black

# *Protosticta sholai* Subramanian & Babu, 2020

ചോല നിഴൽത്തുമ്പി

- Female is similar to the male, but much shorter and stouter



© [Sujith V Gopalan](#)

# Calopterygidae (Broad-wings)

(മരതകത്തുമ്പികൾ)

- Large damselflies with broad head and conspicuous round eyes
- Head, thorax and abdomen metallic green
- Wings are broad and similar in size
- Legs are slender and long
- Some species display courtship behaviour
- Breed in forested streams



© Kesavamurthy N



# *Neurobasis chinensis* (Linnaeus, 1758)

പീലിത്തുമ്പി

- Large damselfly with dark-brown capped bluish green eyes
- Thorax and abdomen are metallic bronze green
- Fore-wings are transparent, tinted in pale yellow with green neuration
- Hind-wings are opaque in brilliant metallic green or peacock-blue at the base and dark brown at the apices

♂



# *Neurobasis chinensis* (Linnaeus, 1758)

പീലിത്തുമ്പി

- Wings of the female are transparent, tinted in yellowish brown
- There are creamy yellow patches at the nodes of all wings
- Pterostigma of hindwings are also in creamy yellow colour

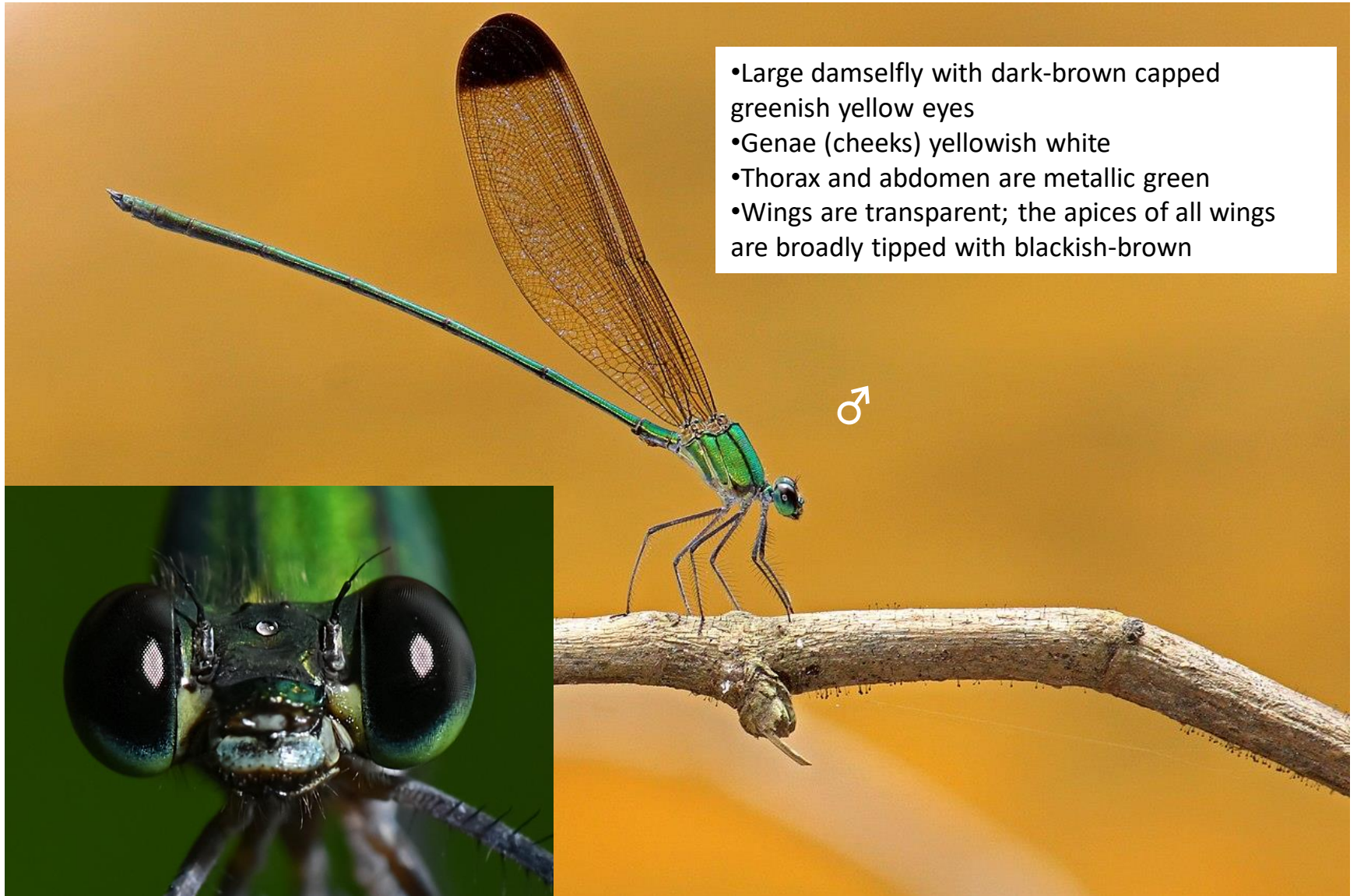
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# *Vestalis apicalis* Selys, 1873

ചുട്ടിച്ചിറകൻ തണൽത്തുമ്പി



- Large damselfly with dark-brown capped greenish yellow eyes
- Genae (cheeks) yellowish white
- Thorax and abdomen are metallic green
- Wings are transparent; the apices of all wings are broadly tipped with blackish-brown



# *Vestalis apicalis* Selys, 1873

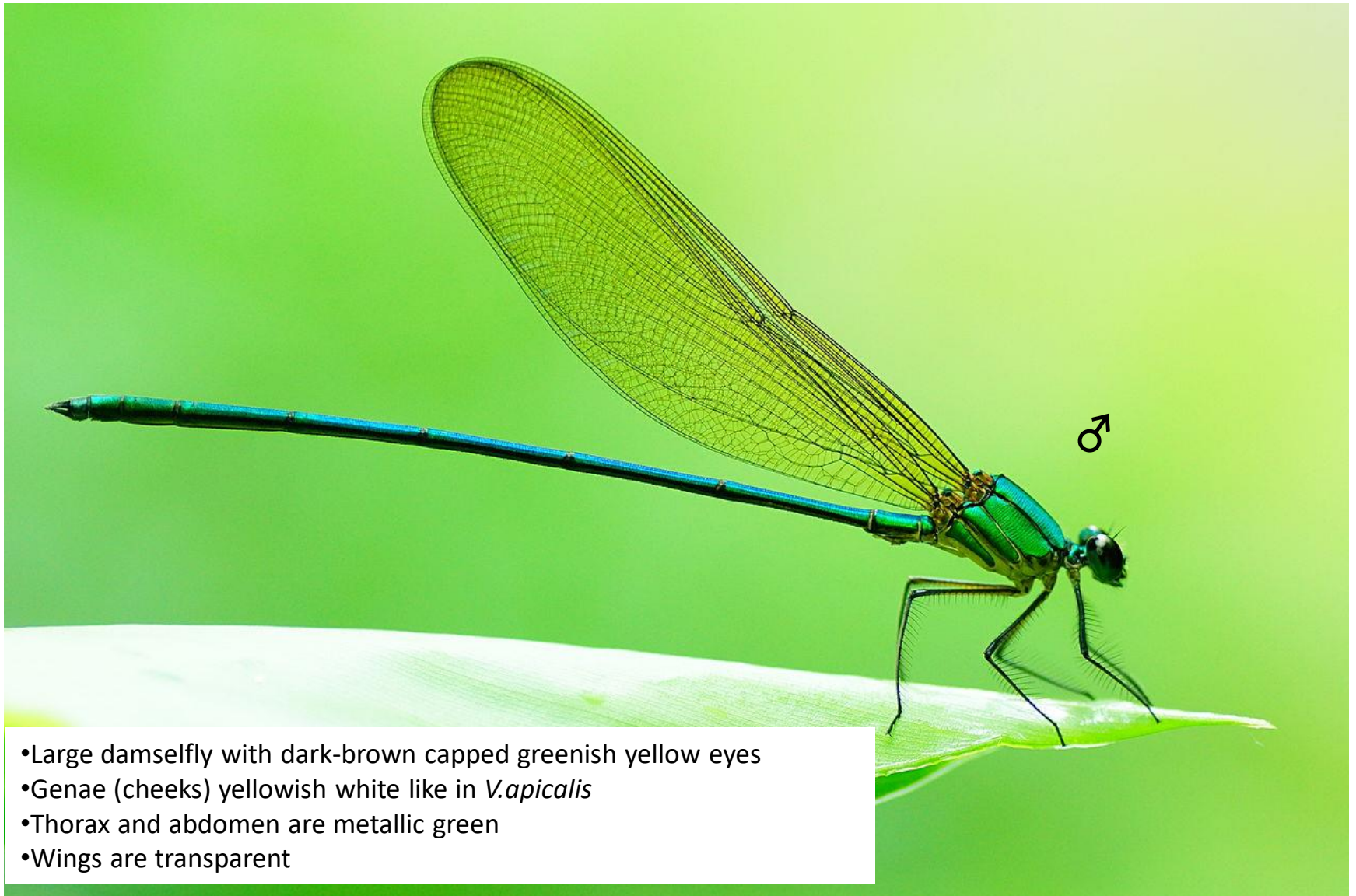
ചുട്ടിച്ചിറകൻ തണൽത്തുമ്പി

•Female similar to male; differing only in sexual characters

♀

# *Vestalis gracilis* (Rambur, 1842)

ചെറിയ തണൽതുമ്പി



- Large damselfly with dark-brown capped greenish yellow eyes
- Genae (cheeks) yellowish white like in *V. apicalis*
- Thorax and abdomen are metallic green
- Wings are transparent



# *Vestalis gracilis* (Rambur, 1842)

ചെറിയ തണൽതുമ്പി

•Female similar to male; differing only in sexual characters



© Anagha devi



# *Vestalis submontana* Fraser, 1934

## കാട്ടു തണൽതുമ്പി

- Large damselfly with dark-brown capped greenish yellow eyes
- Genae (cheeks) black
- Thorax and abdomen are golden-bronzed metallic green
- Wings are transparent. The apices of all wings are tipped with blackish-brown, but much restricted, occupying only about 2.5 mm
- Inferior appendages proportionally longer than in the other two species & ends of superiors more rounded



# *Vestalis submontana* Fraser, 1934

കാട്ടു തണൽതുമ്പി



•Female is similar to the male, but the wings are transparent with apices slightly enfumed



# Chlorocyphidae (Stream Jewels)

(നീർരത്നങ്ങൾ)

- Small damselflies with large bulbous eyes
- Ante- and post-clypeus produced into a long upturned horn-like structure
- Wings with opaque metallic markings in males of some species
- Abdomen is shorter than the wings
- Breed in forested streams
- Eggs are deposited in aquatic plants or logs

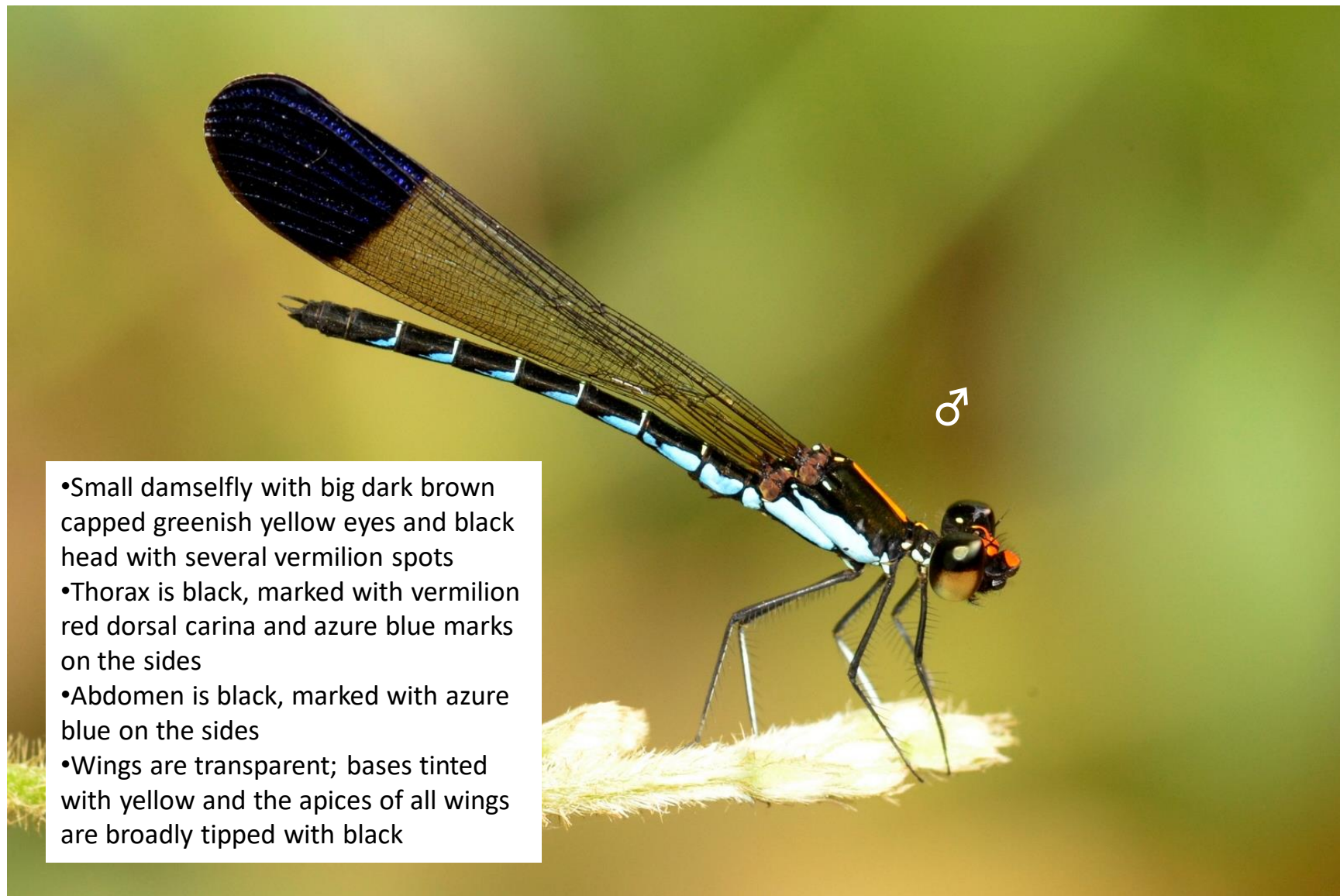


© Rison Thumbor



# *Calocypha laidlawi* (Fraser, 1924)

മേഘവർണ്ണൻ



- Small damselfly with big dark brown capped greenish yellow eyes and black head with several vermilion spots
- Thorax is black, marked with vermilion red dorsal carina and azure blue marks on the sides
- Abdomen is black, marked with azure blue on the sides
- Wings are transparent; bases tinted with yellow and the apices of all wings are broadly tipped with black

# *Calocypha laidlawi* (Fraser, 1924)

## മേഘവർണ്ണൻ

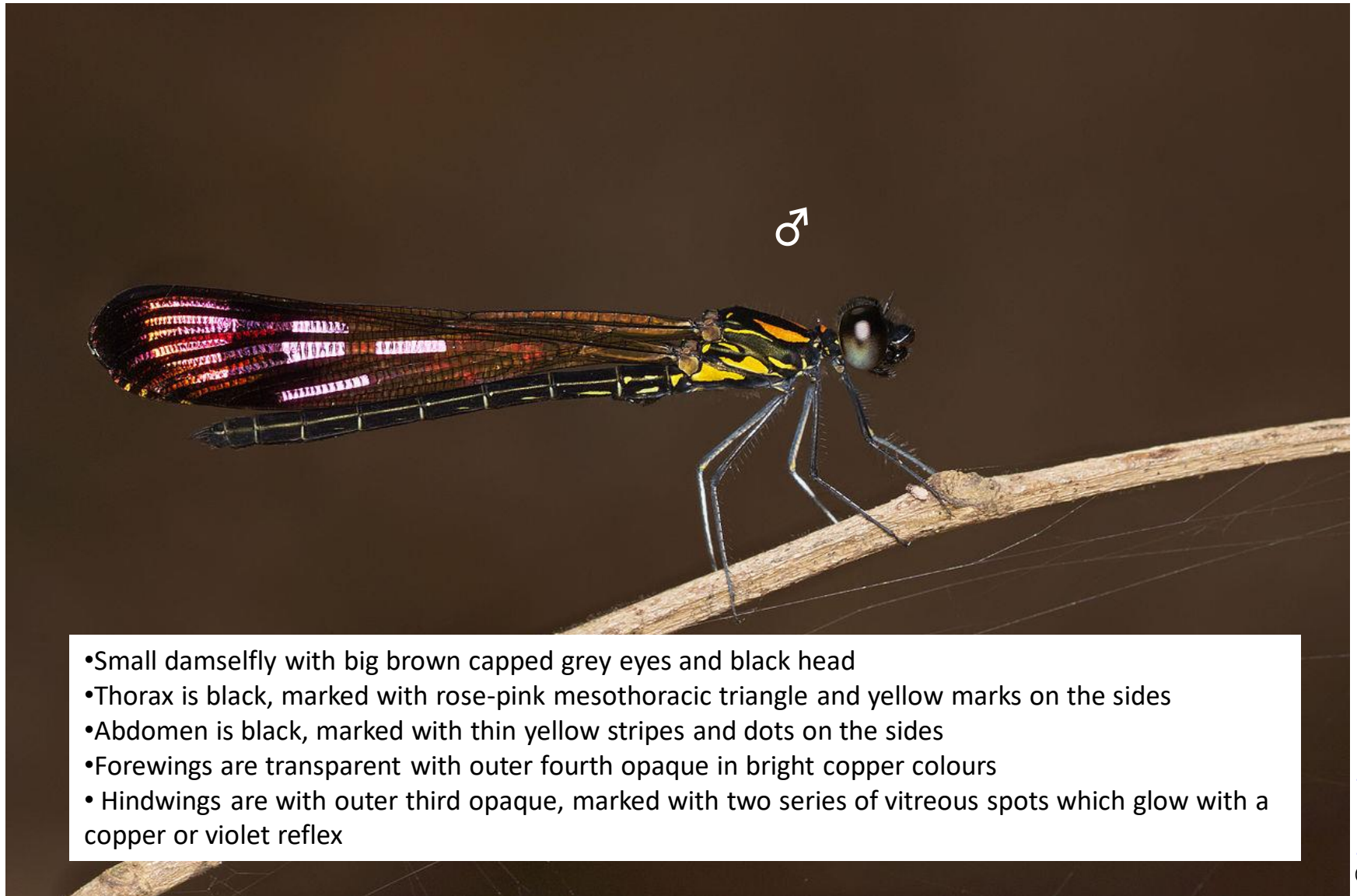
- Female is black with yellow markings on the face, thorax and abdomen
- Abdomen is black, marked with yellow mid-lateral stripes and dots in segments 2 to 7
- Forewings are transparent
- Apices of the hindwings are broadly brown
- Pterostigma are with inner half black and outer half white





# *Heliocypha bisignata* (Hagen in Selys, 1853)

നീർമാണിക്യൻ



- Small damselfly with big brown capped grey eyes and black head
- Thorax is black, marked with rose-pink mesothoracic triangle and yellow marks on the sides
- Abdomen is black, marked with thin yellow stripes and dots on the sides
- Forewings are transparent with outer fourth opaque in bright copper colours
- Hindwings are with outer third opaque, marked with two series of vitreous spots which glow with a copper or violet reflex



# *Heliocypha bisignata* (Hagen in Selys, 1853)

നീർമാണിക്യൻ

- Female has dull colours and transparent wings
- Pterostigma is black with a pale creamy centre
- Thorax is black, marked with fine yellow lines
- Lateral marks on abdomen is similar to the male; but more extensive and continued to more segments



# *Libellago indica* (Fraser, 1928)

തവളക്കണ്ണൻ തുമ്പി

♂

- Small damselfly with big brown capped grey eyes and black face
- Thorax is black, marked with yellow
- Abdomen is black with broad yellow marks on the sides
- Wings are transparent; bases tinted with amber and the apices of fore wings are tipped with black

© Jeevan Jose

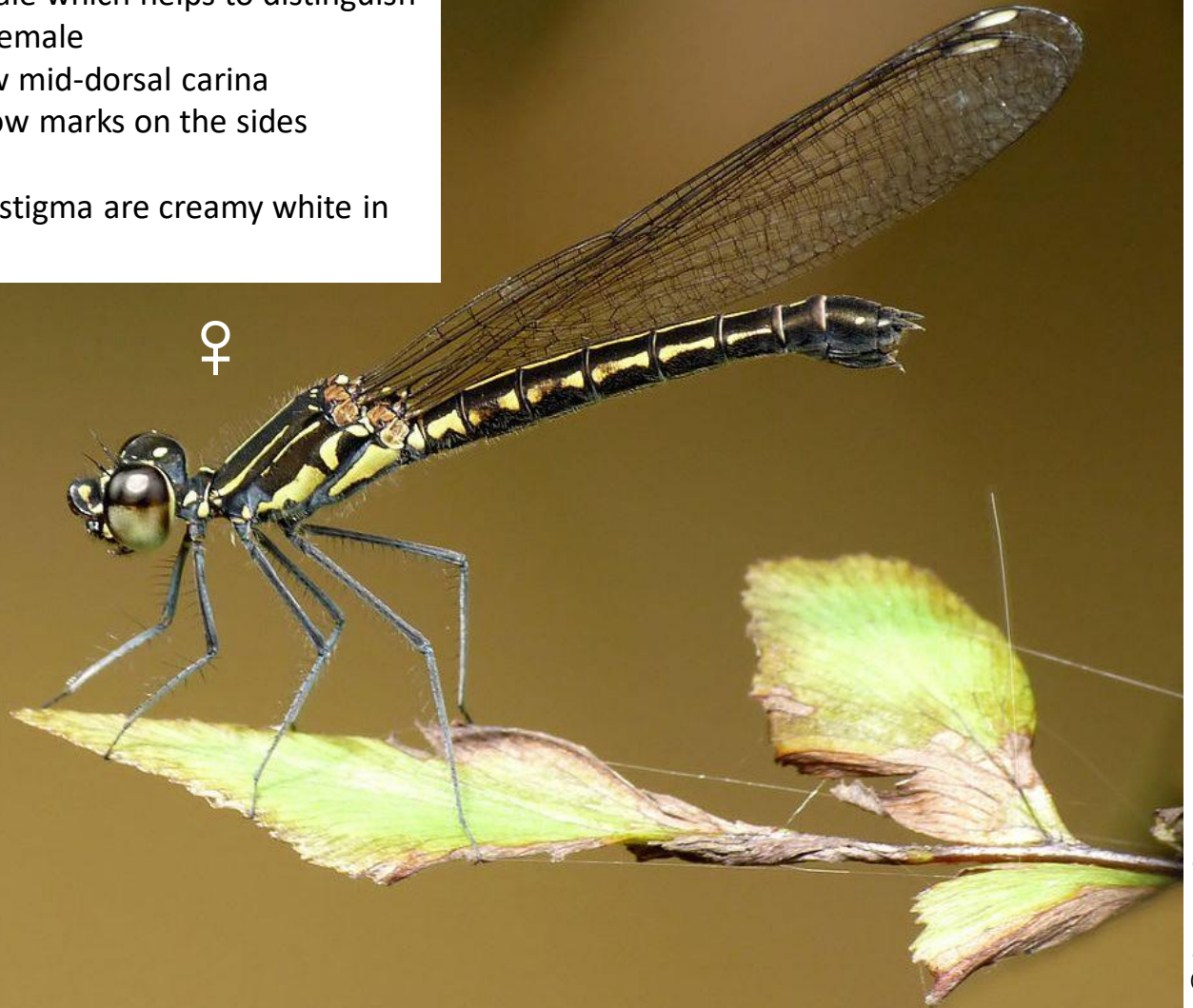


# *Libellago indica* (Fraser, 1928)

## തവളക്കണ്ണൻ തുമ്പി

- Female has dull colours and transparent wings
- Thorax is marked as in the male which helps to distinguish it from *Heliocypha bisignata* female
- Abdomen is black with yellow mid-dorsal carina
- Broad dumbbell-shaped yellow marks on the sides continued to more segments
- Wings are transparent; pterostigma are creamy white in black frame

♀





# Euphaeidae (Gossamer-wings)

(അരുവിയന്മാർ)

- Medium sized damselflies with large round eyes
- Wings are transparent, tinted or with iridescent markings; hindwings shorter than forewings
- Short legs
- Males perch on boulders and dry twigs near streams
- Males open their wings and prominently display the iridescent copper markings of the hindwings
- Breed in forest streams
- Some of them are good bio-indicators



© Jeevan Jose

# *Dysphaea ethela* Fraser, 1924

കരിമ്പൻ അരുവിയൻ



- Medium sized damselfly with brown-capped pale grey eyes
- Thorax is black, marked with narrow yellowish red stripes
- Abdomen is black, marked with yellow apical annules up to segment 8 and yellow lateral stripes up to segment 6
- Wings are transparent; but evenly enfumed with brown



# *Dysphaea ethela* Fraser, 1924

കരിമ്പൻ അരുവിയൻ

- Female is short and robust; the yellow marks are more broad and vivid
- Yellow lateral stripes on the abdomen continued to segment 7
- Segment 9 has a large yellow lateral spot

♀





# *Euphaea cardinalis* (Fraser, 1924)

## തെക്കൻ അരുവിയൻ

- Medium sized damselfly with brown-capped pale grey eyes
- Labrum bright ochreous, narrowly bordered with reddish brown
- Thorax is black, marked with bright ochreous-red stripes
- Abdomen is red up to the segment 6; apical third of segment 6 to the end segment are black



- Forewings are transparent, merely enfolded with brown at the apices
- Hindwings are transparent, but nearly half of the wings from the apices are broadly black
- All legs are red
- Female is yellowish and the wings are transparent

# *Euphaea dispar* Rambur, 1842

വടക്കൻ അരുവിയൻ

- Medium sized damselfly with brown-capped pale grey eyes
- Labrum turquoise blue, finely bordered with black and with a black medio-basal tongue
- Thorax is black, marked with bright ochreous-red stripes
- Abdomen is red up to the segment 6; apical third of segment 6 to the end segment are black
- Forewings are transparent, black on the extreme apices
- Hindwings are transparent, but nearly one third of the wings from the apices are broadly black
- All legs are yellow at base and remaining segments are black





# *Euphaea dispar* Rambur, 1842

വടക്കൻ അരുവിയൻ

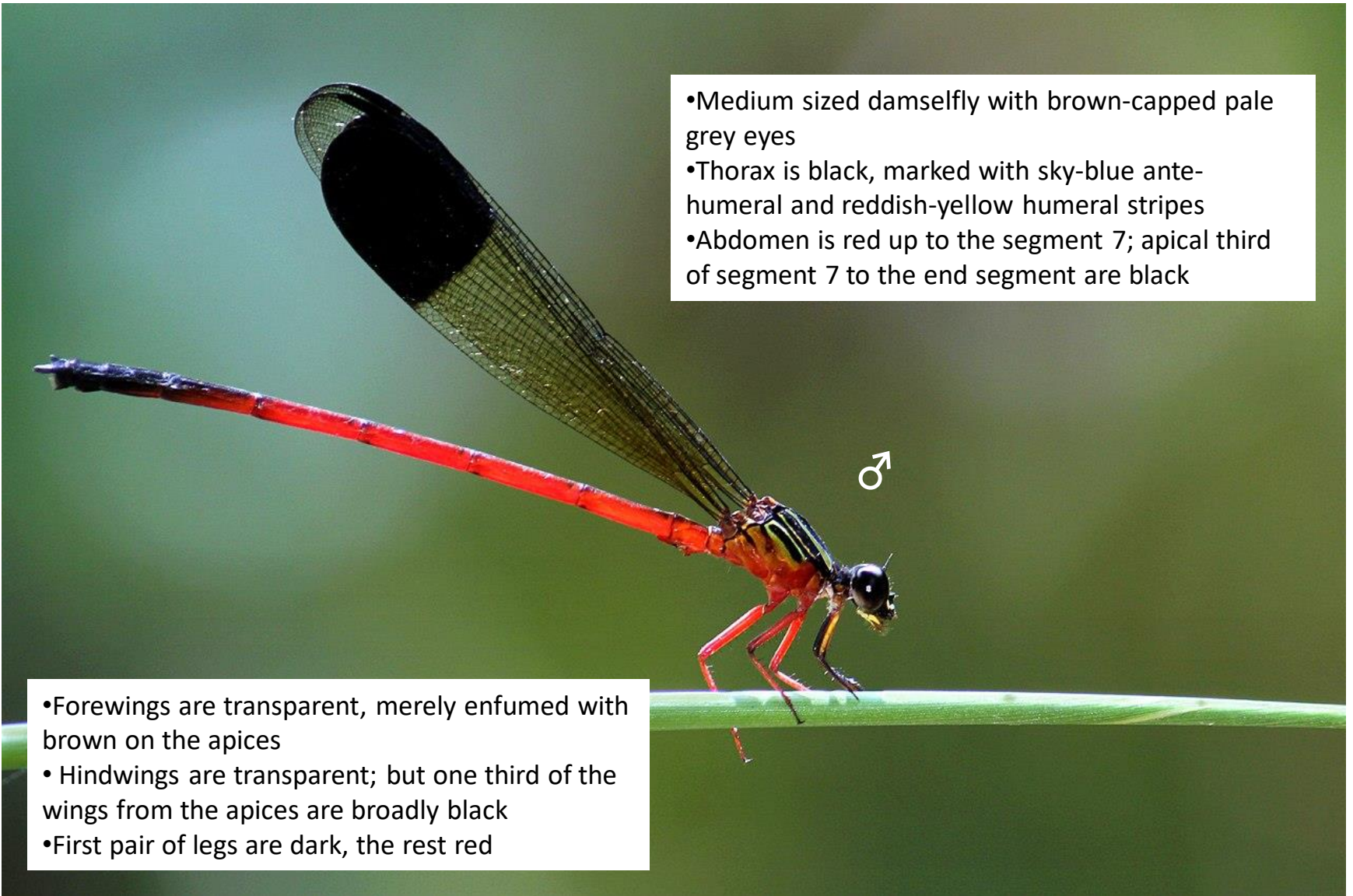
- Female thorax and abdomen are marked with yellow
- Wings are transparent, enfumed with brown

♀



# *Euphaea fraseri* (Laidlaw, 1920)

ചെങ്കുരുപ്പൻ അരുവിയൻ



- Medium sized damselfly with brown-capped pale grey eyes
- Thorax is black, marked with sky-blue ante-humeral and reddish-yellow humeral stripes
- Abdomen is red up to the segment 7; apical third of segment 7 to the end segment are black

- Forewings are transparent, merely enfumed with brown on the apices
- Hindwings are transparent; but one third of the wings from the apices are broadly black
- First pair of legs are dark, the rest red

# *Euphaea fraseri* (Laidlaw, 1920)

ചെങ്കുപ്പൻ അരുവിയൻ

- Female thorax and abdomen are marked with yellow
- Wings are transparent, palely enfumed with brown

♀



# Platycnemididae (White-legs)

(പാൽത്തുമ്പികൾ)

- Small to medium sized and slender damselflies
- The family is divided into several subfamilies, including Platycnemidinae (Bushdarts) and Disparoneurinae (Bambootails)
- They are black with blue, red or yellow markings
- Abdomen is long, but not as long as in Platystictidae
- Breed in slow-flowing streams



© David v Raju



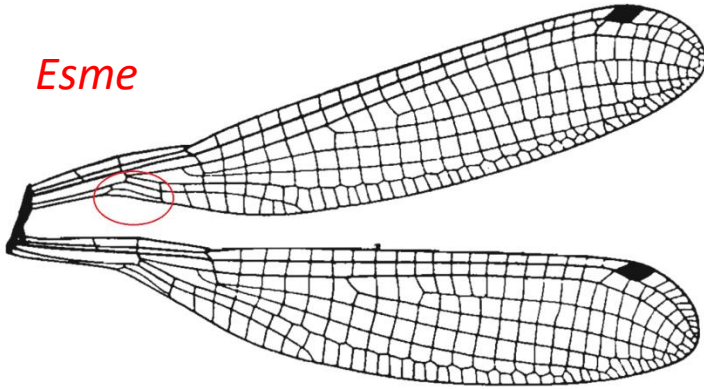
# Black & Blue Bambootails of the Western Ghats: Wing venation

*Esme* & *Phylloneura* species have a complete anal bridge

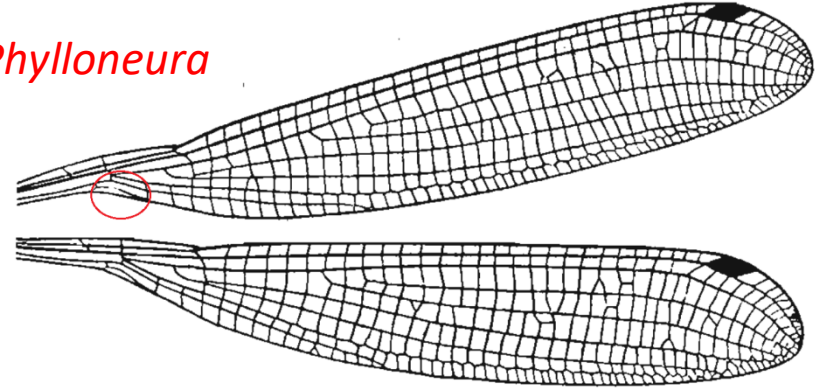
*Caconeura* species have an incomplete anal bridge

*Melanoneura* species completely lack the anal bridge

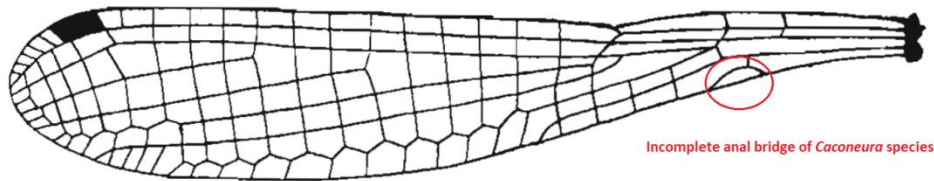
*Esme*



*Phylloneura*

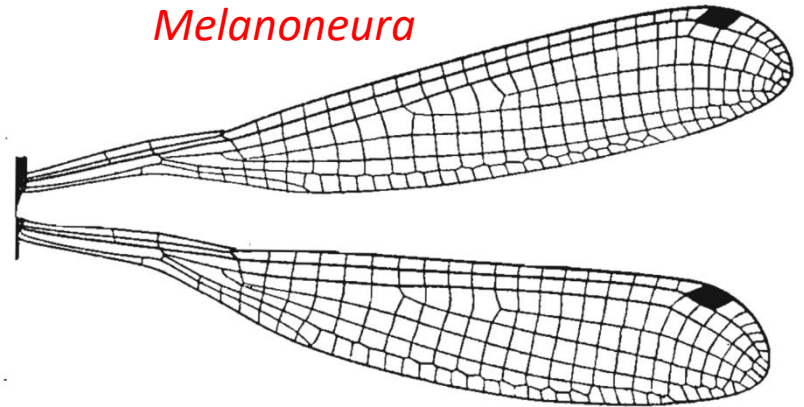


*Caconeura*

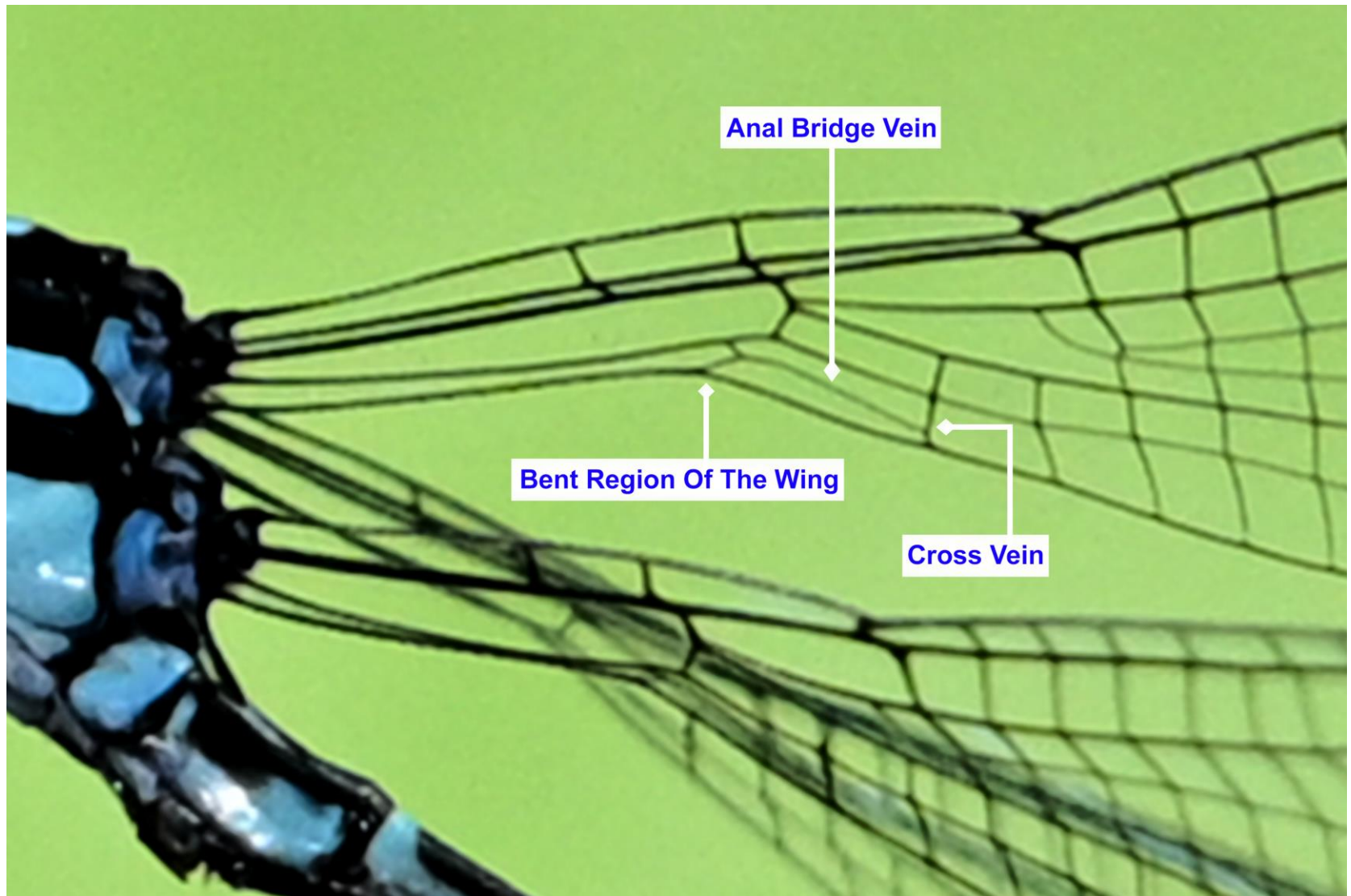


Incomplete anal bridge of *Caconeura* species

*Melanoneura*



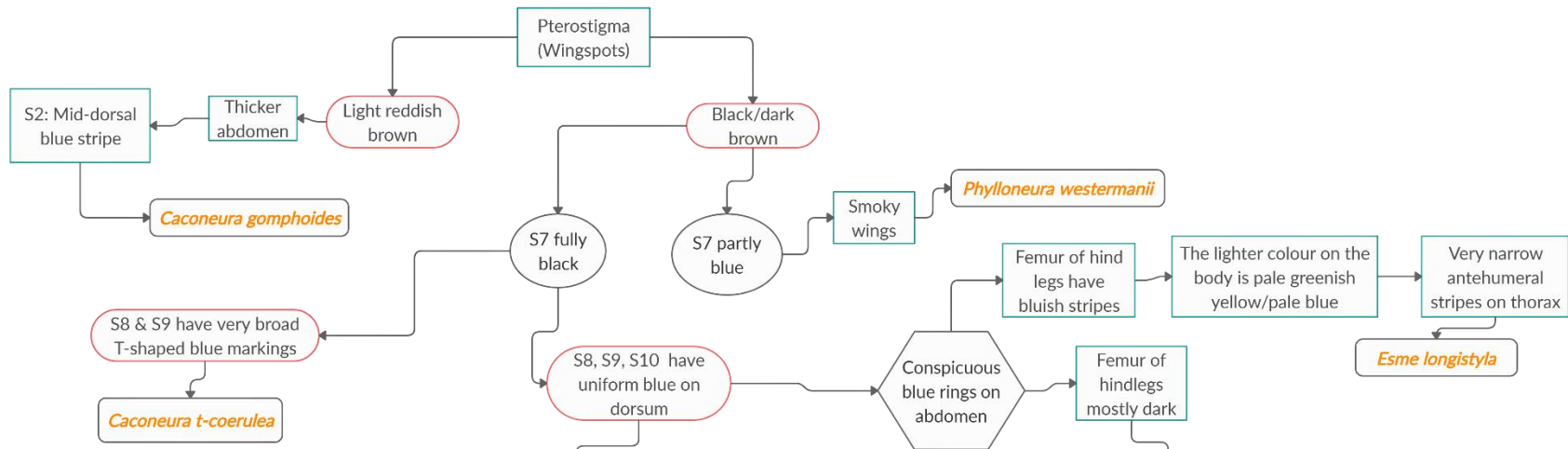
# Black & Blue Bambootails of the Western Ghats: Wing venation



© Reji Chandran

Wing of *Esme longistyla* showing the complete anal bridge

## The Black & Blue Bambootails of the Western Ghats



*Melanoneura bilineata*



Fig. 110.—Anal appendages of *Melanoneura bilineata* Fras., male, viewed from the left.

Very prominent dorsal spine of the superior anal appendages- gives the shape of a wrist about to clasp something

Photos: Dr. Abraham Samuel  
Ref: Fraser (1933), Subramanian *et al.* (2018)  
Compiled by: Vivek Chandran A

*Esme mudiensis*

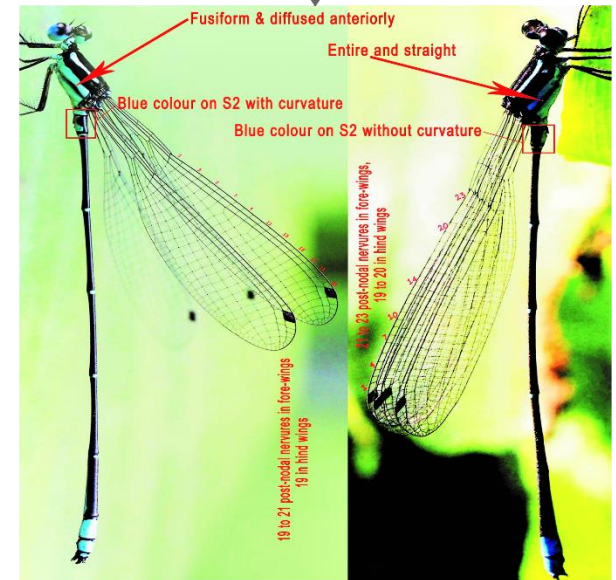


Fig. 113.—Anal appendages of *Esme mudiensis* Fras., male, viewed from the left.

*Esme cyaneovittata*



Fig. 112.—Anal appendages of *Esme cyaneovittata* Fras., male, viewed from the left.



*Caconeura risi*

*Caconeura ramburi*



# *Caconeura gomphoides* (Rambur, 1842)

## കാട്ടുമുളവാലൻ

- Medium sized damselfly with black-capped blue eyes
- Thorax is velvet-black on dorsum with azure blue stripes, azure blue on sides
- Abdomen is black, marked with azure blue on the sides of segments 1 and 2
- There is a mid-dorsal blue mark on segment 2
- Segments 3 to 6 have broad baso-dorsal annules of blue
- Segments 8 to 10 are blue with ventral borders broadly black
- Pterostigma are reddish-brown
- Comparatively shorter and thicker than other species in this genus



- Female is similar to the male; differs mainly in the blue markings on the terminal abdominal segments

# *Caconeura ramburi* (Fraser, 1922)

## മലബാർ മുളവാലൻ

- Medium sized damselfly with black-capped blue eyes
- Thorax is velvet-black on dorsum with a narrow azure blue stripe, azure blue on sides with another black complete stripe
- Abdomen is black, marked with azure blue on the sides of segment 1 and 2
- Segments 3 to 7 have broad baso-dorsal annules of blue
- Segments 8 to 10 are blue with ventral borders broadly black
- 21 to 23 postnodal nervures in the forewings
- Segments 8 and 9 are black with dorsal and ventral borders blue





# *Caconeura ramburi* (Fraser, 1922)

മലബാർ മുളവാലൻ



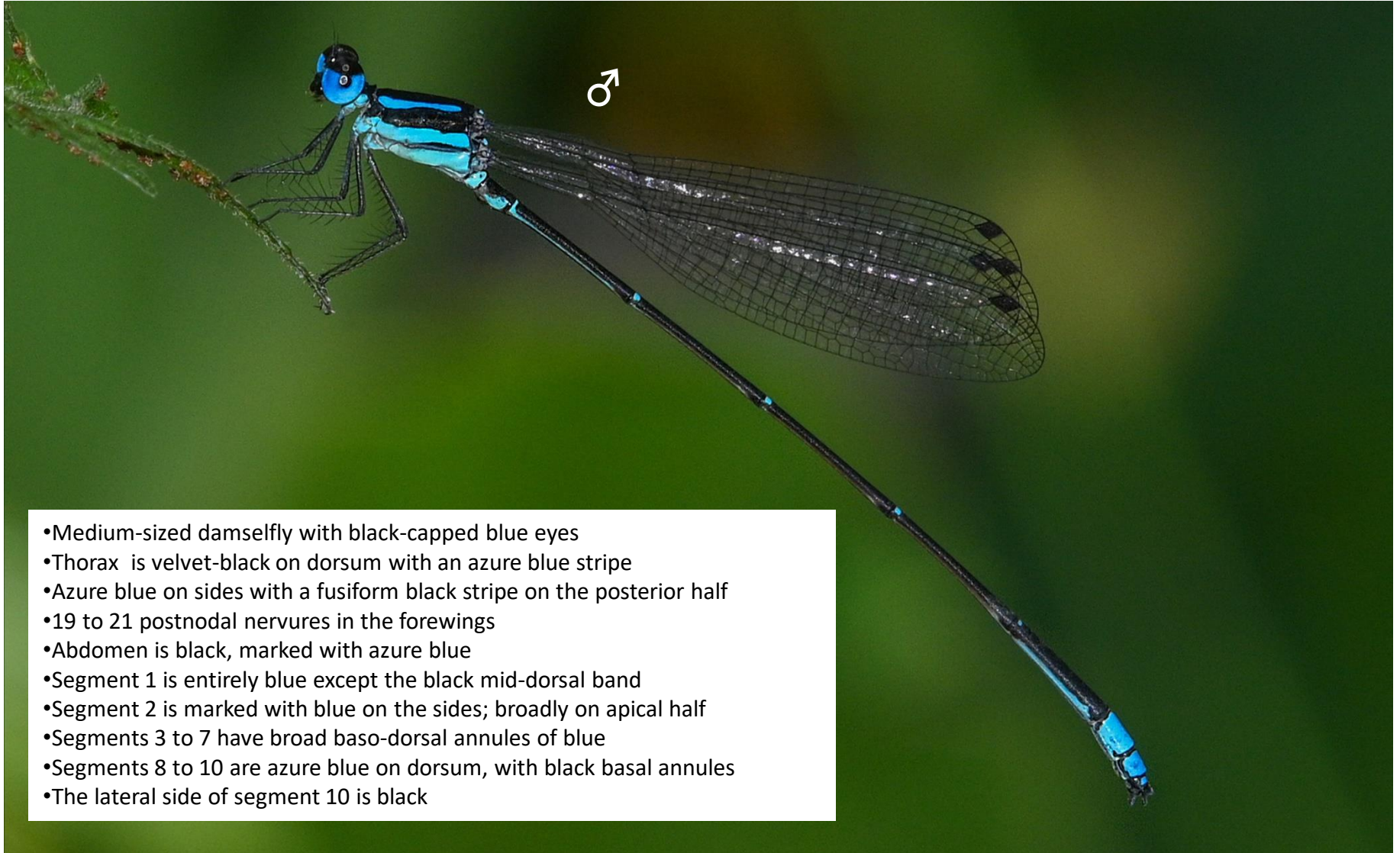
•In female, the blue is replaced with creamy yellow and the basal annules in the abdomen are less visible

© Reji Chandran



# *Caconeura risi* (Fraser, 1931)

വയനാടൻ മുളവാലൻ



- Medium-sized damselfly with black-capped blue eyes
- Thorax is velvet-black on dorsum with an azure blue stripe
- Azure blue on sides with a fusiform black stripe on the posterior half
- 19 to 21 postnodal nervures in the forewings
- Abdomen is black, marked with azure blue
- Segment 1 is entirely blue except the black mid-dorsal band
- Segment 2 is marked with blue on the sides; broadly on apical half
- Segments 3 to 7 have broad baso-dorsal annules of blue
- Segments 8 to 10 are azure blue on dorsum, with black basal annules
- The lateral side of segment 10 is black

# *Caconeura risi* (Fraser, 1931)

വയനാടൻ മുളവാലൻ



•In female, the blue is paler and the basal annules in the abdomen less visible

© Reji Chandran

# *Copera marginipes* (Rambur, 1842)

മഞ്ഞക്കാലി പാൽത്തുമ്പി



- Medium sized damselfly with brown-capped yellow eyes with a narrow equatorial black band
- Thorax is black on dorsum marked with irregular bluish yellow and yellow stripes and dots, yellowish on the sides
- Abdomen is black on dorsal half up to segment 8, paler on ventral half
- Segment 9 is bluish white on dorsal half and black below it; segment 10 is bluish white
- Anal appendages are pale yellow to white, the inferiors tipped with black
- The superiors are half the length of segment 10 and inferiors are four times the length of superiors



# *Copera marginipes* (Rambur, 1842)

മഞ്ഞക്കാലി പാൽത്തുമ്പി

- Female is more robust, dull in colours and marks less conspicuously defined
- Tenerals of both sexes can be fully white with a few black markings

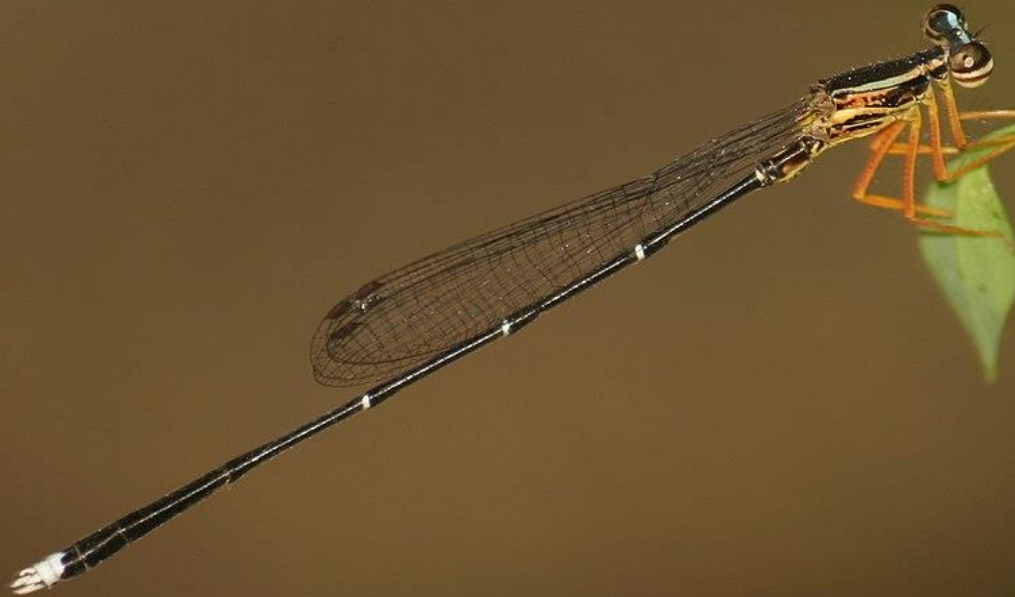


# *Copera vittata* (Selys, 1863)

ചെങ്കാലി പാൽത്തുമ്പി



♂



- Medium sized damselfly with brown-capped yellow eyes with a narrow equatorial black band
- Thorax is black on dorsum marked with irregular bluish yellow and ochreous stripes and dots, yellowish on the sides
- Abdomen is black on dorsal half up to segment 8, paler on ventral half
- Segment 9 is bluish white on dorsal half and black below it; segment 10 is bluish white
- Anal appendages are pale blue or creamy white
- The superiors are as long as segment 10, conical, and tapered at apices
- The inferiors nearly twice the length of superiors
- Female is more robust, dull in colours, indistinguishable from *C. marginipes* in the field

# *Copera vittata* (Selys, 1863)

ചെങ്കാലി പാൽത്തുമ്പി

- Tenerals of both species and sexes can be fully white with a few black markings

♂



# *Disparoneura apicalis* (Fraser, 1924)

## ചുട്ടിച്ചിറകൻ മുളവാലൻ

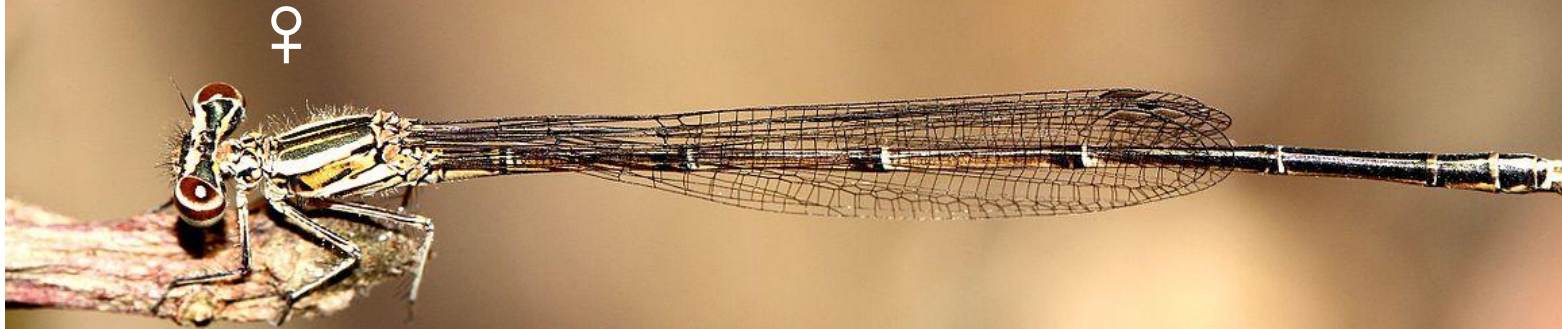
- Medium sized damselfly with reddish brown eyes, yellowish green beneath
- Thorax is metallic greenish black on dorsum with narrow brownish stripes which get obscured by blue pruinescence in adults
- Abdomen is blackish brown, with small white basal rings on segments 3 to 7
- Wings are transparent with the apices of the wings, deep blackish-brown



# *Disparoneura apicalis* (Fraser, 1924)

## ചുട്ടിച്ചിറകൻ മുളവാലൻ

- Eyes of the female are yellowish white with a polar cap and an equatorial belt of reddish-brown
- Thorax is black on dorsum and yellowish-white on the sides, marked with black and brown
- Wings are transparent
- Abdomen is yellowish white, broadly marked with black on dorsum





# *Disparoneura quadrimaculata* (Rambur, 1842)

## കരിഞ്ചിറകൻ മുളവാലൻ

- Medium sized damselfly with brick-red eyes, with two horizontal dark red equatorial lines
- Thorax is bright brick red on dorsum, paler on the sides; marked with black
- Abdominal segments 2 to 6 are reddish brown with broadly black on the apical ends
- Segments 7 to 9 are black; segment 10 and anal appendages are pale brown
- Wings are transparent, but have a broad blackish brown fascia, which extends from the node to the pterostigma





# *Disparoneura quadrimaculata* (Rambur, 1842)

കരിഞ്ചിറകൻ മുളവാലൻ

- Female is more robust, black markings more extensive and better defined
- Thorax is black on dorsum, paler on the sides, marbled with black
- Wings are transparent
- Abdomen is yellowish brown, dorsally marked with black
- Segments 3 to 7 have white basal spots and black apical annules
- Segment 8 and 9 are broadly marked with white on dorsum



# *Elatoneura souteri* (Fraser, 1924)

## ചെങ്കുപ്പൻ മുളവാലൻ

- Medium sized damselfly with reddish brown eyes, greenish yellow beneath
- Head is black, marked with a cherry red band across the face from eye to eye
- Thorax is velvet black, marked with broad cherry red ante-humeral stripes
- There is another lateral stripe of citron yellow in the first lateral suture, cherry red in anterior border
- Abdomen is black with red and yellow marks on segments 1 to 3





# *Elattoneura souteri* (Fraser, 1924)

ചെങ്കുപ്പൻ മുളവാലൻ

♀

- Female has dark brown capped greenish yellow eyes
- Head is black, marked with a golden yellow band across the face from eye to eye
- Thorax is black, marked with broad greenish yellow stripes instead of red
- Abdomen is black with yellowish brown lateral stripes



# *Elattoneura tetrica* (Laidlaw, 1917)

മഞ്ഞക്കറുപ്പൻ മുളവാലൻ

- Medium sized damselfly with black-capped pale blue eyes, marked with a black equatorial belt
- Thorax is velvet black, marked with creamy white stripes
- Abdomen is black with segments 3 to 6 having small baso-dorsal yellow annules
- All these pale marks may get pruinose with blue in adults



# *Elattoneura tetrica* (Laidlaw, 1917)

മഞ്ഞക്കറുപ്പൻ മുളവാലൻ

•Female is similar to the young male

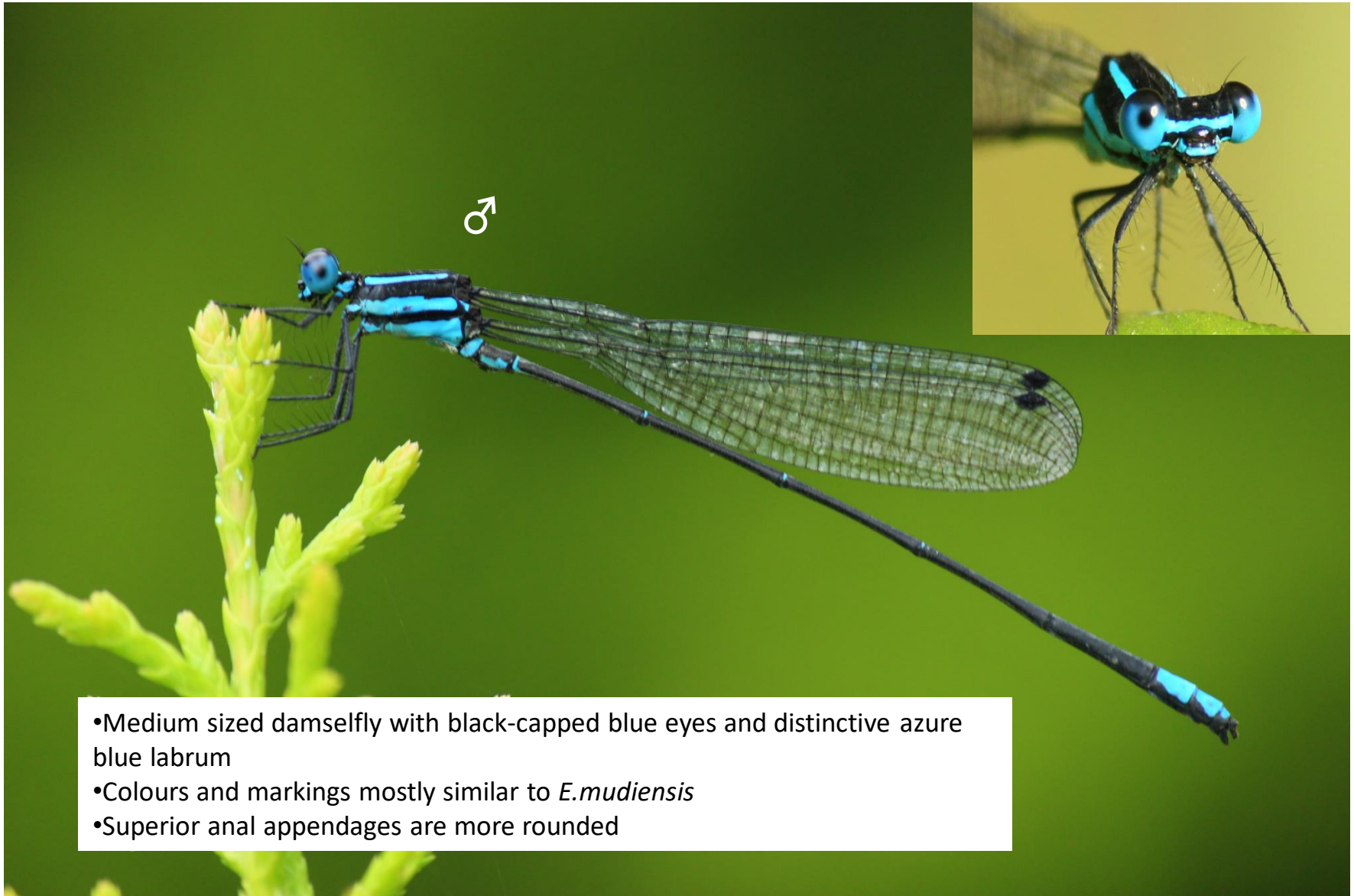
♀



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# *Esme cyaneovittata* Fraser, 1922

പഴനി മുളവാലൻ



- Medium sized damselfly with black-capped blue eyes and distinctive azure blue labrum
- Colours and markings mostly similar to *E.mudiensis*
- Superior anal appendages are more rounded



# *Esme cyaneovittata* Fraser, 1922

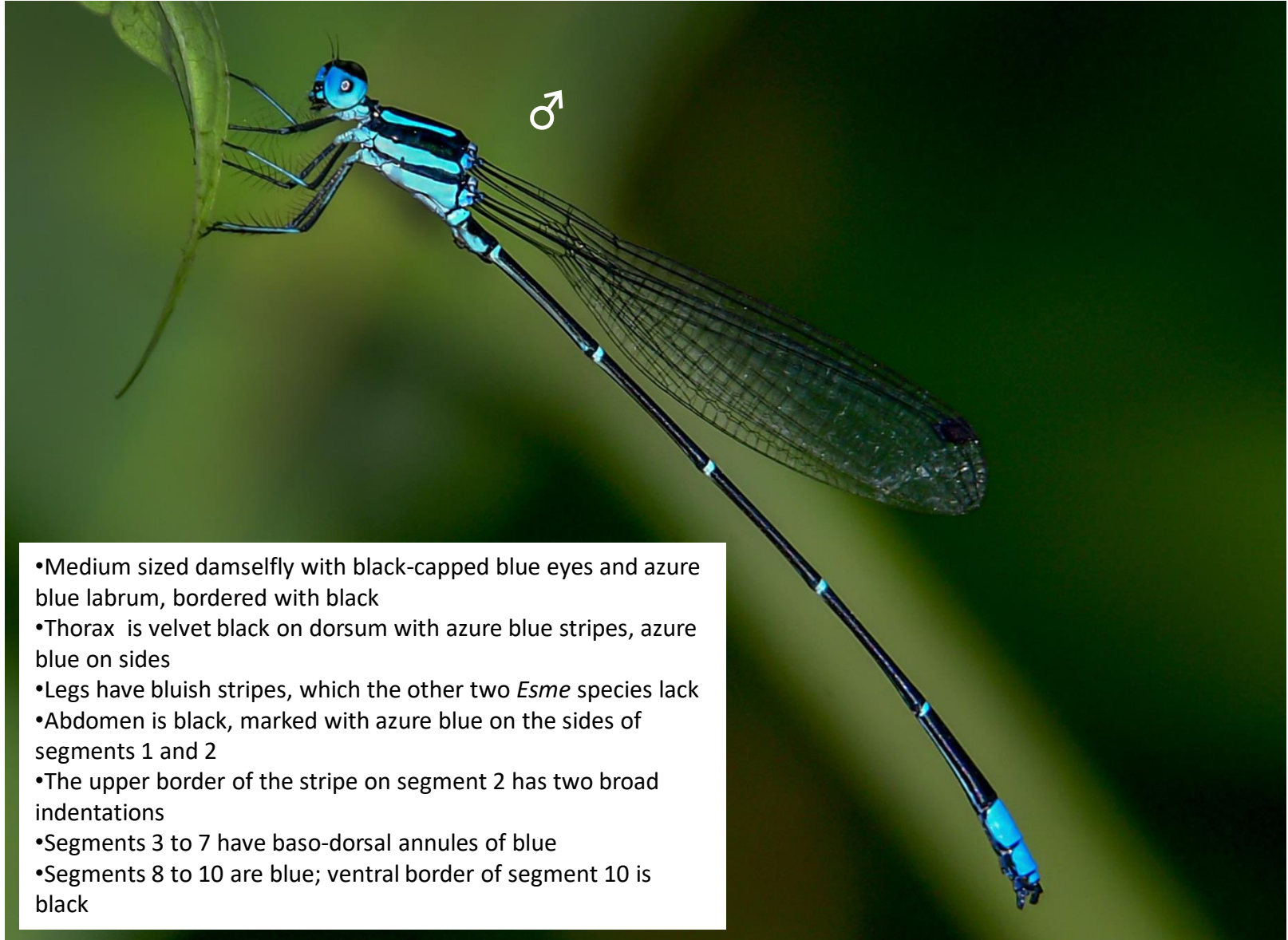
പഴനി മുളവാലൻ



- Female is similar to the male; differs mainly in the blue markings on the terminal abdominal segments which are merely small spots

# *Esme longistyla* Fraser, 1931

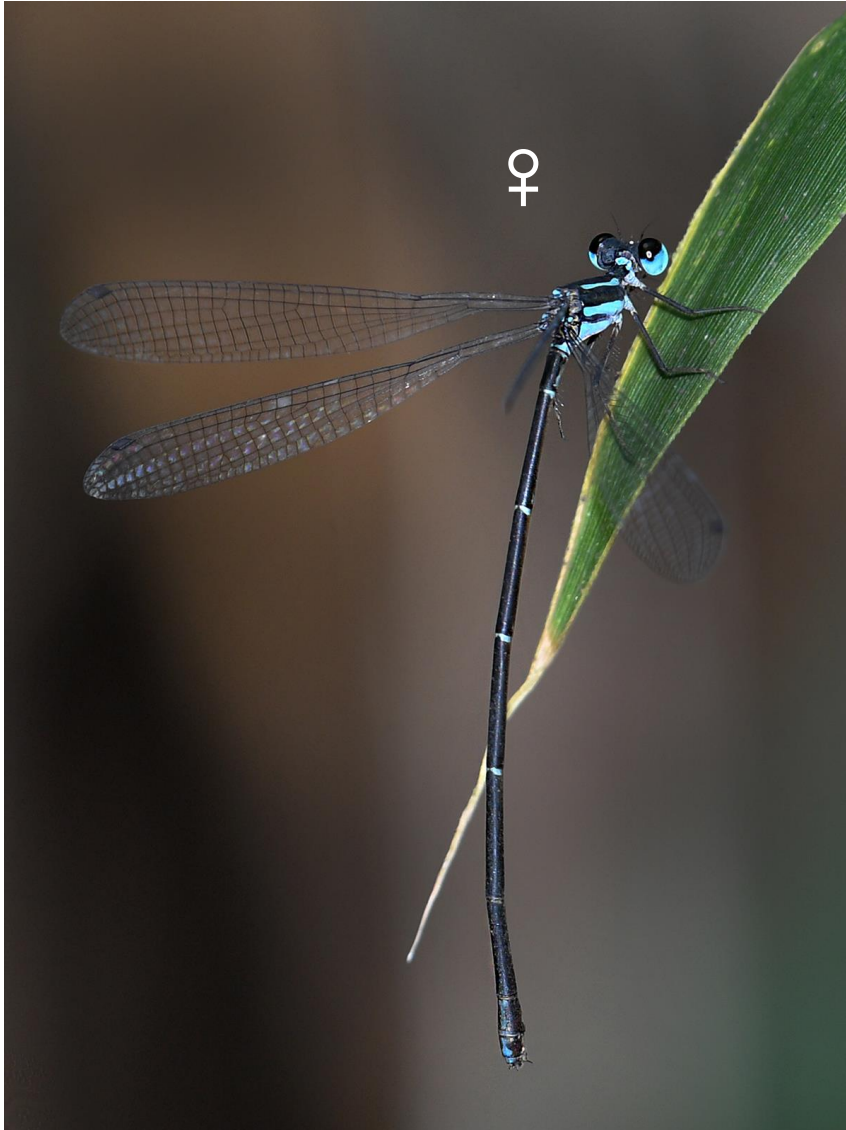
നീലഗിരി മുളവാലൻ



- Medium sized damselfly with black-capped blue eyes and azure blue labrum, bordered with black
- Thorax is velvet black on dorsum with azure blue stripes, azure blue on sides
- Legs have bluish stripes, which the other two *Esme* species lack
- Abdomen is black, marked with azure blue on the sides of segments 1 and 2
- The upper border of the stripe on segment 2 has two broad indentations
- Segments 3 to 7 have baso-dorsal annules of blue
- Segments 8 to 10 are blue; ventral border of segment 10 is black

# *Esme longistyla* Fraser, 1931

## നീലഗിരി മുളവാലൻ

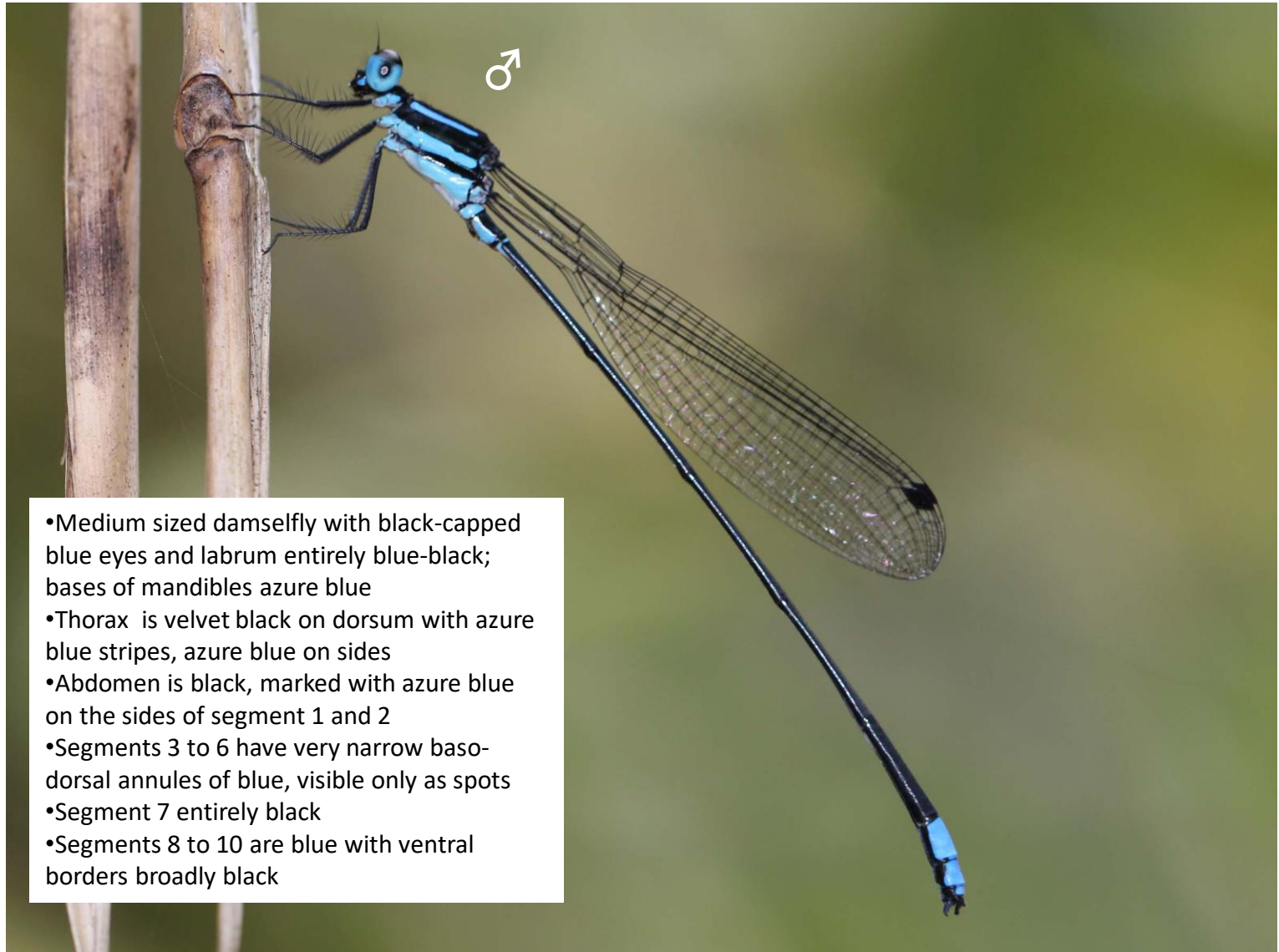


- Female is duller in colours and the terminal abdominal segments have only pale blue spots.



# *Esme mudiensis* Fraser, 1931

തെക്കൻ മുളവാലൻ



- Medium sized damselfly with black-capped blue eyes and labrum entirely blue-black; bases of mandibles azure blue
- Thorax is velvet black on dorsum with azure blue stripes, azure blue on sides
- Abdomen is black, marked with azure blue on the sides of segment 1 and 2
- Segments 3 to 6 have very narrow baso-dorsal annules of blue, visible only as spots
- Segment 7 entirely black
- Segments 8 to 10 are blue with ventral borders broadly black

# *Esme mudiensis* Fraser, 1931

തെക്കൻ മുളവാലൻ



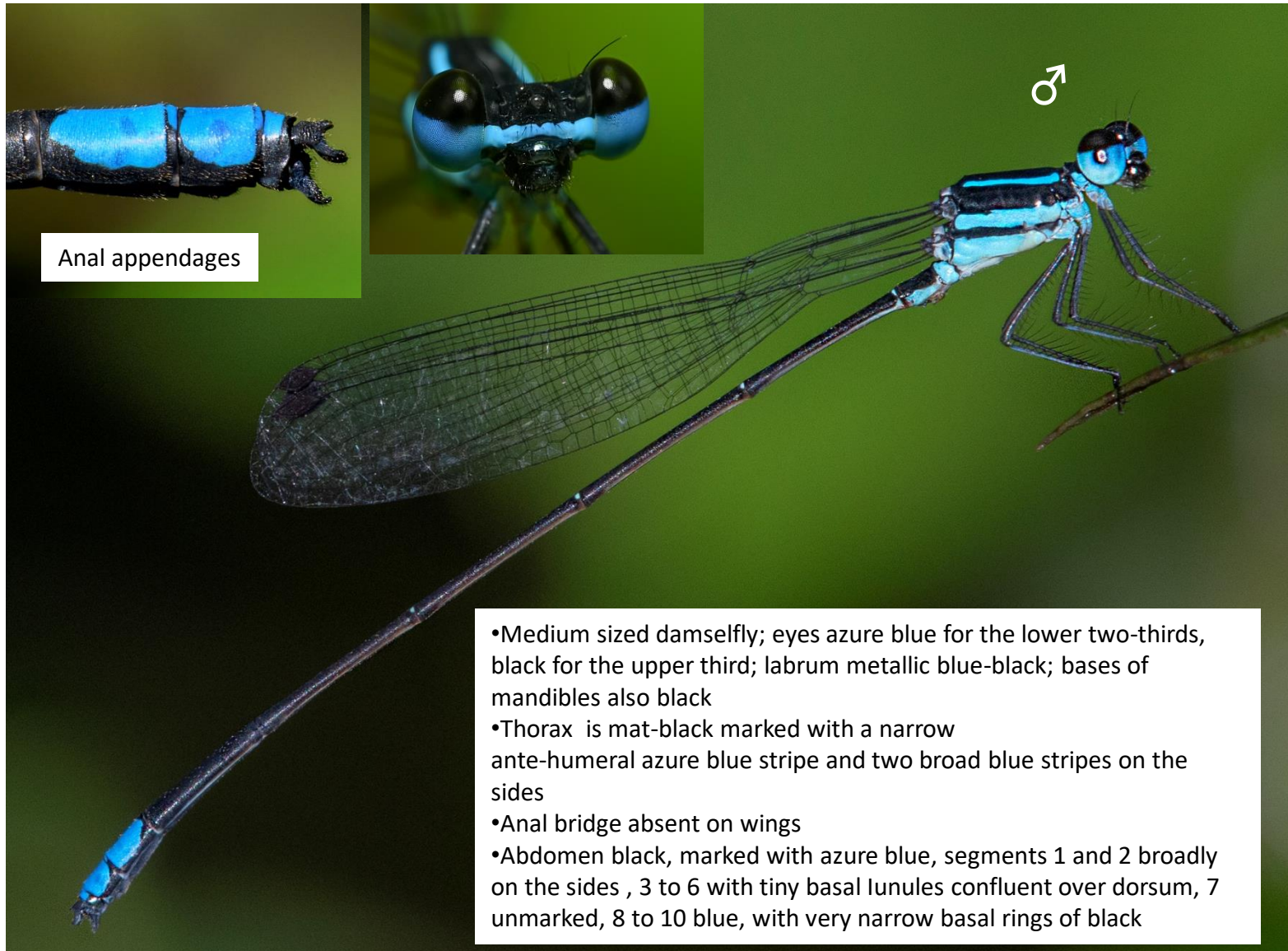
- Female is duller in colours and the terminal abdominal segments have only pale blue spots.

Balachandran V

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# *Melanoneura bilineata* Fraser, 1922

വടക്കൻ മുളവാലൻ



© Reji Chandran



# *Melanoneura bilineata* Fraser, 1922

വടക്കൻ മുളവാലൻ



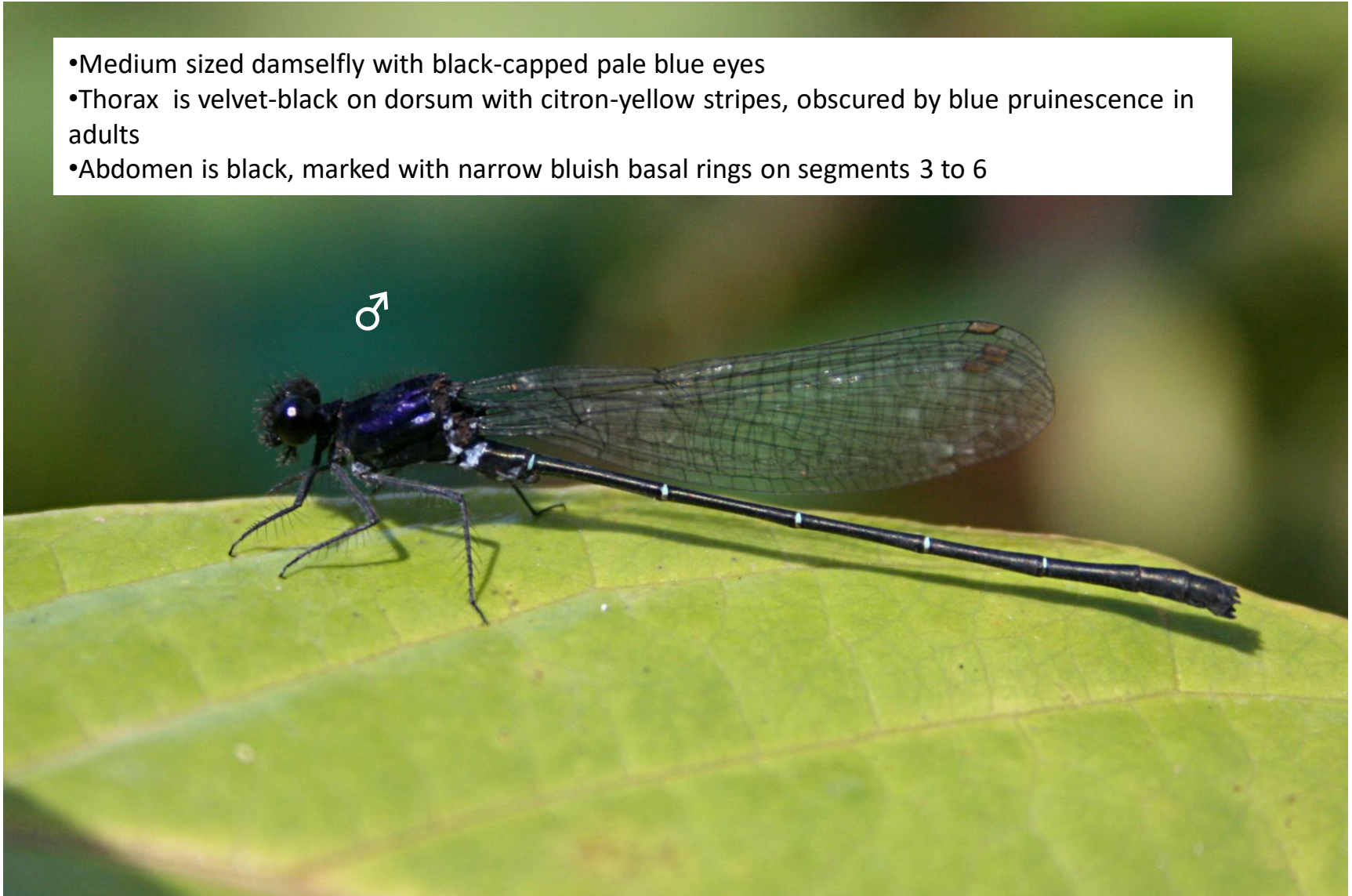
- Female is duller in colours and the blue in terminal abdominal segments is much restricted



# *Onychargia atrocyana* Selys, 1865

എണ്ണക്കുറുപ്പൻ

- Medium sized damselfly with black-capped pale blue eyes
- Thorax is velvet-black on dorsum with citron-yellow stripes, obscured by blue pruinescence in adults
- Abdomen is black, marked with narrow bluish basal rings on segments 3 to 6





# *Onychargia atrocyana* Selys, 1865

എസ്കറുപ്പൻ

- Female is black with yellow markings as in the sub-adult male

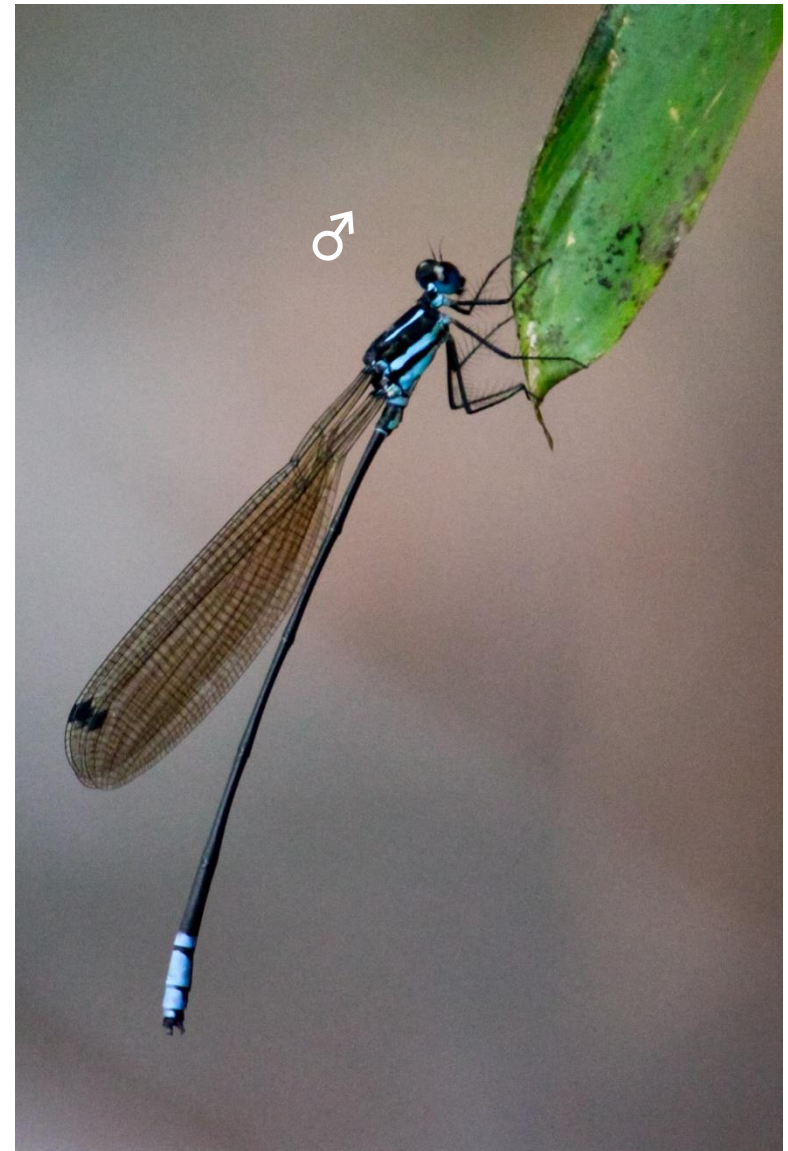




# *Phylloneura westermanni* (Hagen in Selys, 1860)

## ചതുപ്പു മുളവാലൻ

- Medium sized damselfly with black-capped blue eyes and azure blue labrum , bordered with black
- Thorax is velvet-black on dorsum with azure blue stripes, azure blue on sides
- Wings deeply enfumed; 28-31 post nodal nervures in forewings
- Abdomen is black, marked with azure blue on the sides of segment 1 and 2
- Segments 3 to 5 have very narrow baso-dorsal annules of blue; segment 6 is black
- Apical half of segment 7 and segments 8 to 9 are blue with very narrow black basal annules
- Segment 10 is blue on dorsum, black laterally



# *Phylloneura westermanni* (Hagen in Selys, 1860)

ചതുപ്പു മുളവാലൻ



- Female is duller in colours and the blue in terminal abdominal segments is much restricted

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# *Prodasineura verticalis* (Selys, 1860)

കരിഞ്ഞമ്പൻ മുളവാലൻ

- Medium sized damselfly with black-capped brown eyes
- Thorax is velvet-black, marked with red and yellow stripes
- Abdomen is black with segments 3 to 6 having small baso-dorsal yellow spots





# *Prodasineura verticalis* (Selys, 1860)

## കരിഞ്ഞമ്പൻ മുളവാലൻ

- Female has black-capped yellowish white eyes
- Thorax is velvet-black, marked with yellowish white stripes
- Abdomen is black with segments 3 to 6 having baso-dorsal yellow spots as in the male, much broader
- Segments 8 to 10 dorsally marked with yellow

♀



# Coenagrionidae (Narrow-wings)

(നിലത്തന്മാർ)

- Largest damselfly family
- Slender and small damselflies
- Have varied colouration, including green, blue, yellow, orange, or purple
- Usually narrow, colourless and clear wings
- Breed in ponds, marshes and wetlands, but some species in streams
- Eggs are deposited in living or dead submerged vegetation
- Some species even crawl underwater to deposit their eggs



© Rison Thumboor

# *Aciagrion approximans krishna* Fraser, 1921

നീലച്ചിന്നൻ

- Small, slender damselfly with brown-capped greenish eyes
- Thorax is black with lateral violet stripes
- Abdomen is violet with broad black dorsal marks up to segment 7
- Segments 8 and 9 are violet; lower half of segment 8 is marked with black



© Renjith Jacob Mathews



# *Aciagrion approximans krishna* Fraser, 1921

നീലച്ചിന്നൻ



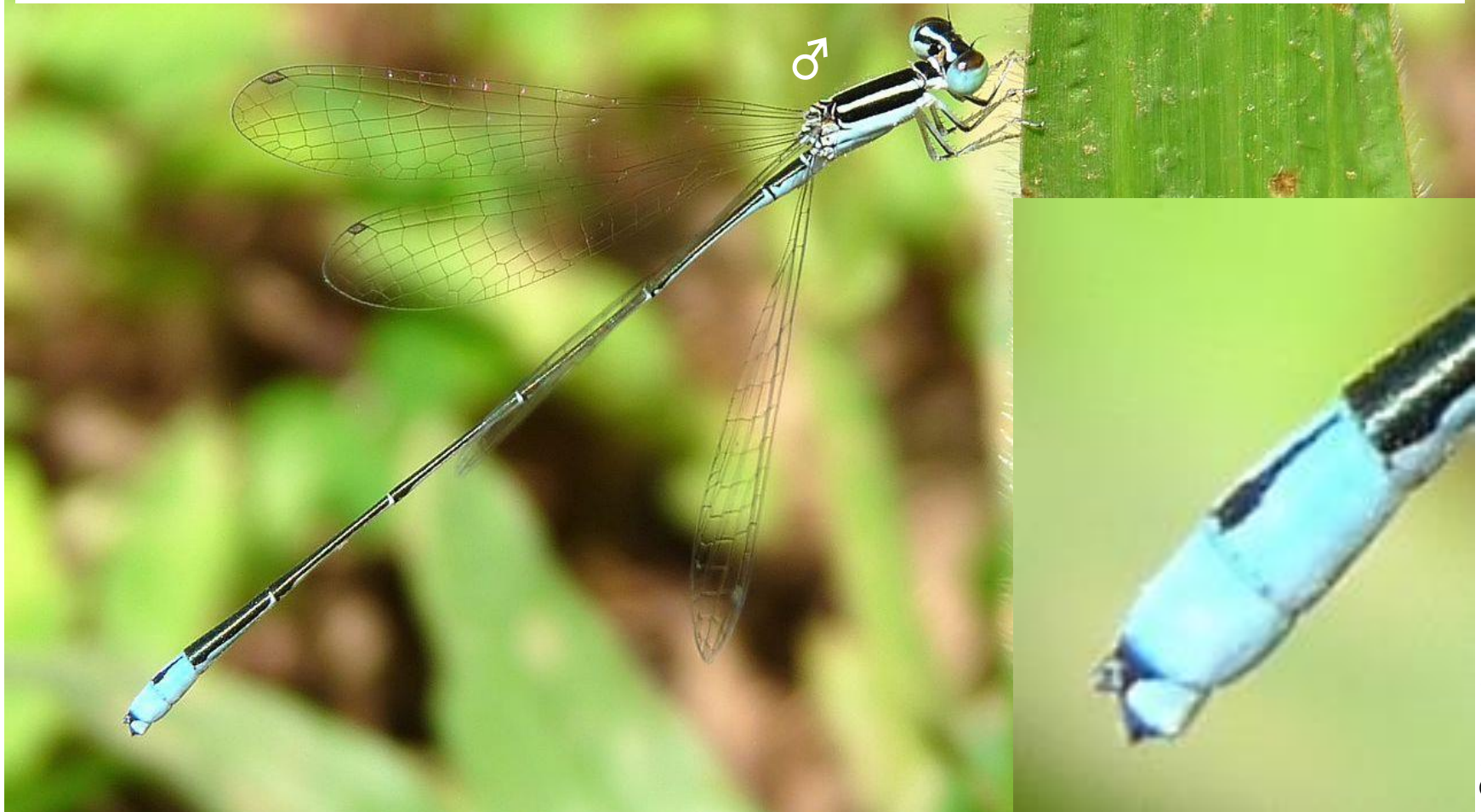
- Female similar to male, but much duller in colours

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# *Aciagrion occidentale* Laidlaw, 1919

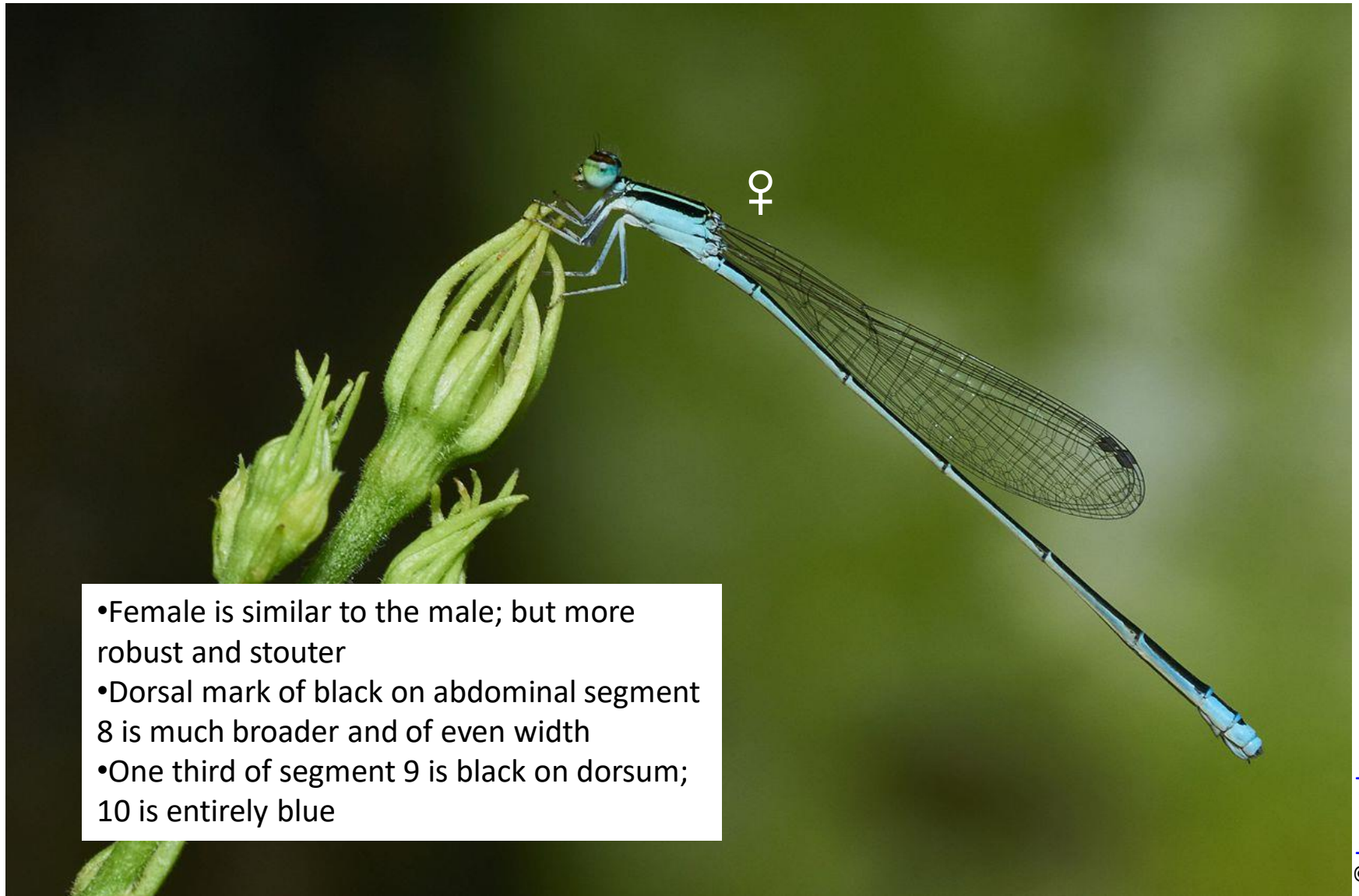
## നീലച്ചുട്ടി

- Small, slender damselfly with brown-capped pale blue eyes
- Thorax is black with lateral azure blue stripes
- Abdomen is azure blue with broad black dorsal marks up to segment 7
- Segment 8 is blue with a narrow black dorsal spot shaped like an inverted 'Y'; segment 9 is blue



# *Aciagrion occidentale* Laidlaw, 1919

നീലച്ചുട്ടി



- Female is similar to the male; but more robust and stouter
- Dorsal mark of black on abdominal segment 8 is much broader and of even width
- One third of segment 9 is black on dorsum; 10 is entirely blue



# *Agriocnemis keralensis* Peters, 1981

പത്തി പുൽച്ചിന്നൻ

- Small damselfly with brown capped green eyes
- Thorax is black, marked with apple green stripes
- Pterostigma bright orange
- Abdomen is orange with black markings
- Segment 2 of the abdomen has a distinct oval mark on dorsum

♂



# *Agriocnemis keralensis* Peters, 1981

പത്തി പുൽച്ചിന്നൻ

- Abdomen of the female is apple green with black marks
- Immature females are reddish

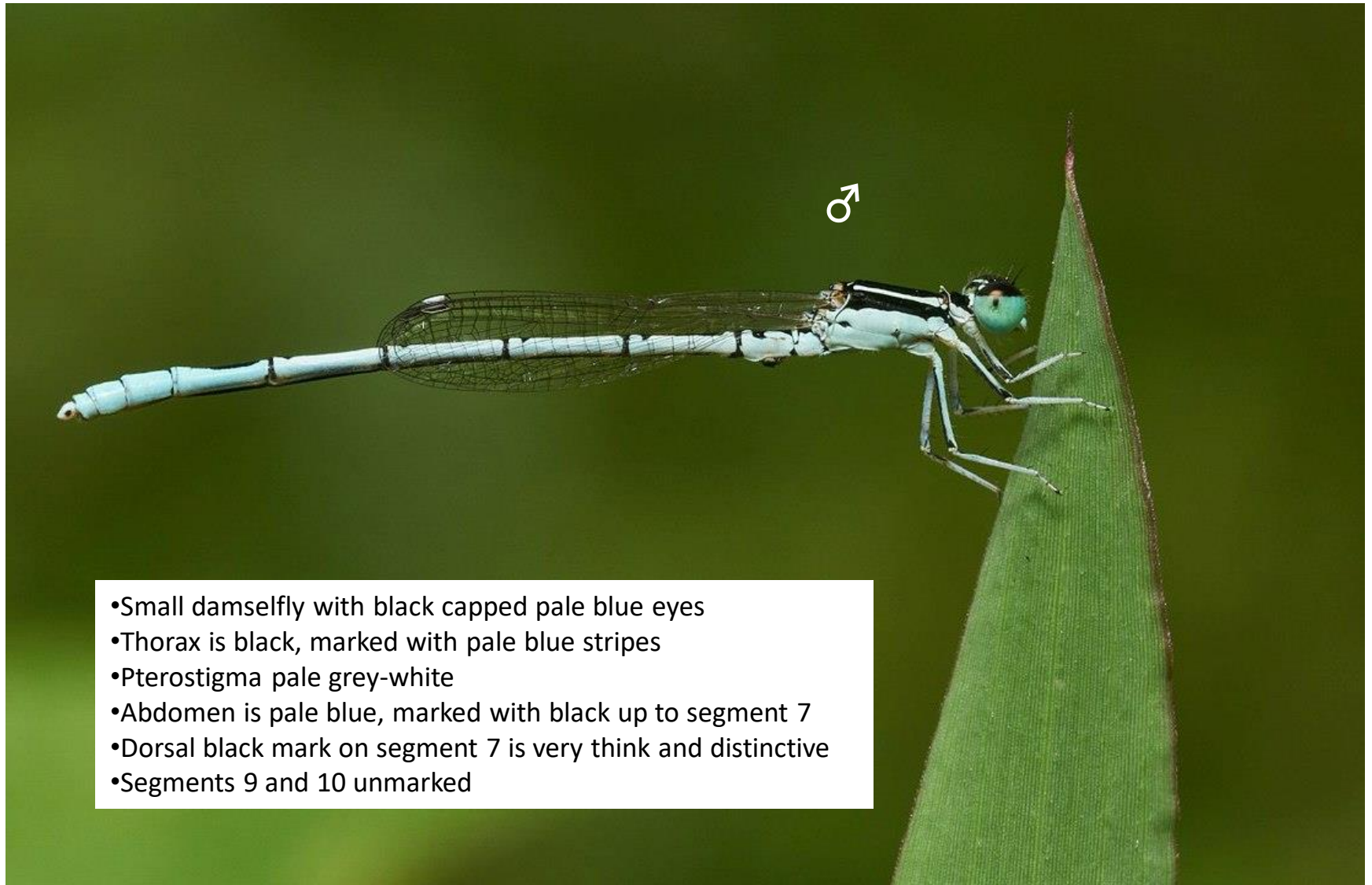
♀



Red morph

# *Agriocnemis pieris* Laidlaw, 1919

വെള്ളപ്പുൽച്ചിന്നൻ



- Small damselfly with black capped pale blue eyes
- Thorax is black, marked with pale blue stripes
- Pterostigma pale grey-white
- Abdomen is pale blue, marked with black up to segment 7
- Dorsal black mark on segment 7 is very thick and distinctive
- Segments 9 and 10 unmarked



# *Agriocnemis pieris* Laidlaw, 1919

വെള്ളപ്പുൽച്ചിന്നൻ



# *Agriocnemis pygmaea* (Rambur, 1842)

## നാട്ടുപുൽച്ചിന്നൻ

- Small damselfly with black capped green eyes
- Thorax is black, marked with green stripes
- Pterostigma pale yellow in forewings, black in hindwings
- Abdomen is greenish yellow, marked with black up to segment 7
- Remaining segments and anal appendages are orange





# *Agriocnemis pygmaea* (Rambur, 1842)

നാട്ടുപുൽച്ചിന്നൻ

- Female is more robust and exhibits several colour morphs
- In red form, thorax is black on dorsum and pink on the sides, marked with brick-red stripes
- Abdomen is brick-red, terminal segments are suffused with black

♀

Red morph





# *Agriocnemis pygmaea* (Rambur, 1842)

നാട്ടുപുൽച്ചിന്നൻ

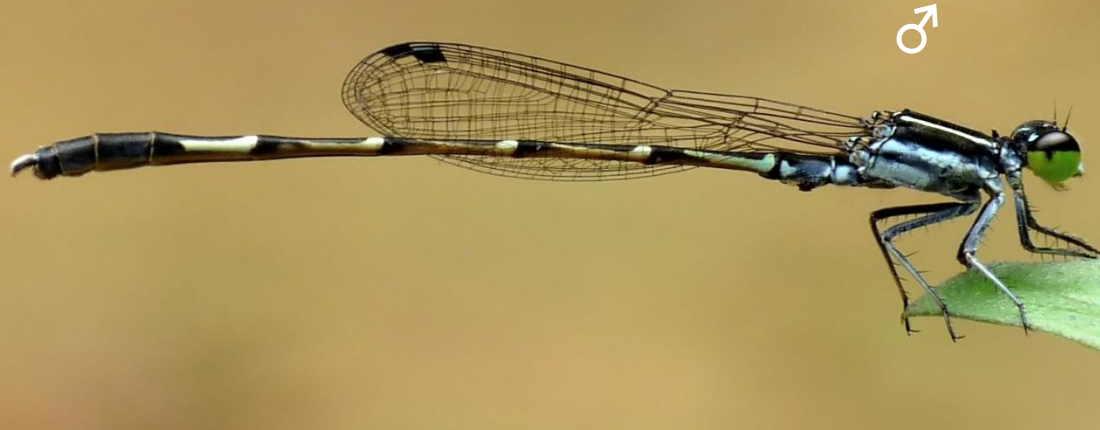
- In androchrome form, thorax is black on dorsum and green on the sides as in the male
- But the antehumeral stripe is bluish brown instead of black
- Abdomen is greenish yellow with orange terminal segments, dorsally marked with black as in the male



# *Agriocnemis splendidissima* Laidlaw, 1919

## കാട്ടുപുൽച്ചിന്നൻ

- Small damselfly with black capped greenish eyes
- Thorax is black, marked with pinkish blue stripes, turn to pruinose blue in adults
- Pterostigma black
- Abdomen is very slender and in ground-red colors, marked with black
- Abdomen also gets pruinose with blue in adults
- Superior anal appendages are long, narrow, and curved downward



# *Agriocnemis splendidissima* Laidlaw, 1919

കാട്ടുപുൽച്ചിന്നൻ

- Female is similar to the male; but more robust and greenish yellow or brownish as in young males
- Juvenile males and females are reddish

♀

Red morph





# *Amphiallagma parvum* (Selys, 1876)

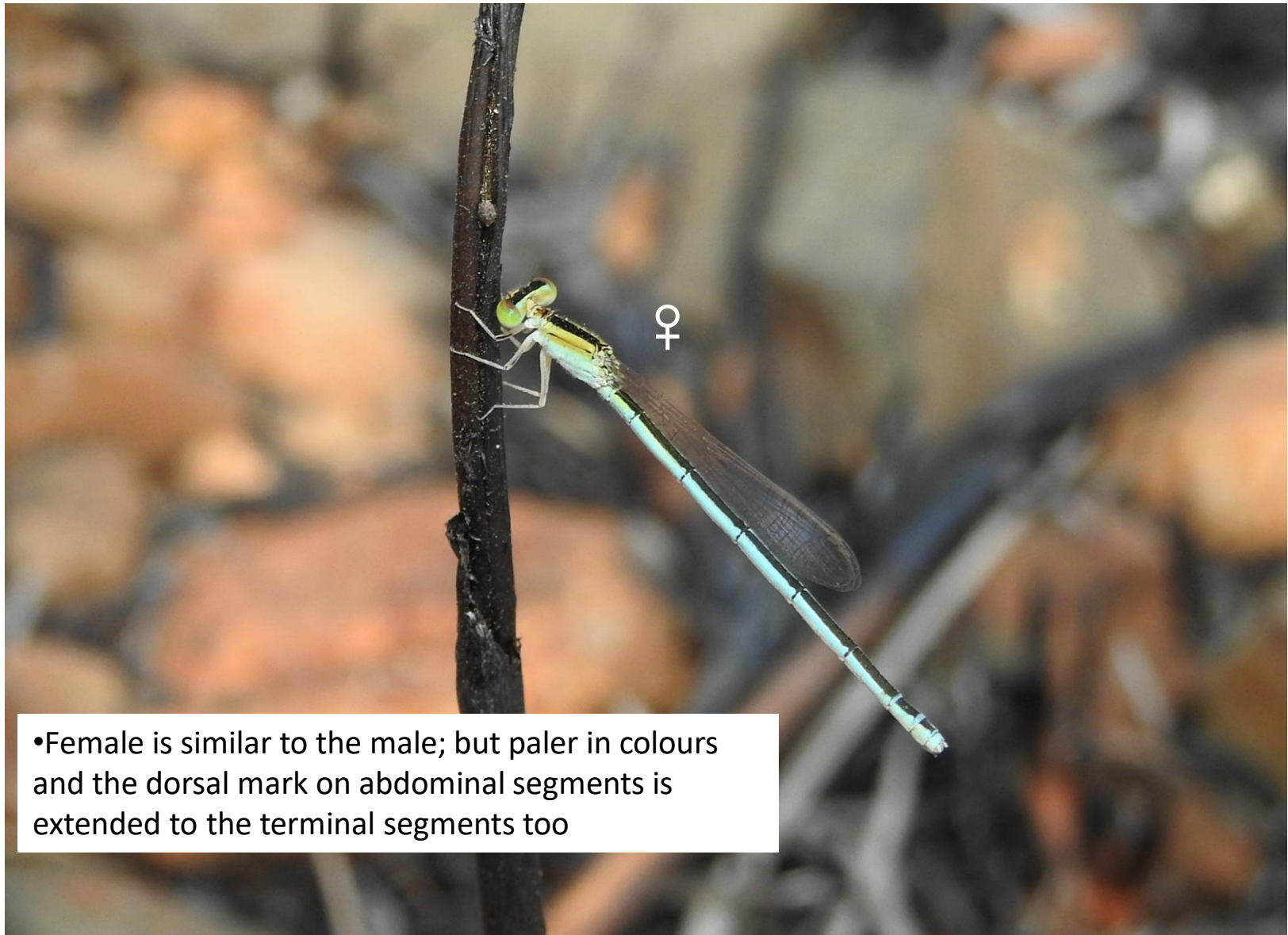
## ചെറുനീലിത്തുമ്പി

- Small, slender damselfly with sky-blue eyes slightly capped with black
- Thorax is black with lateral azure blue stripes
- Abdomen is azure blue with black dorsal marks up to segment 7
- Segments 8 to 10 are blue; segment 10 has a narrow mid-dorsal stripe



# *Amphiallagma parvum* (Selys, 1876)

ചെറുനീലിത്തുമ്പി



- Female is similar to the male; but paler in colours and the dorsal mark on abdominal segments is extended to the terminal segments too



# *Archibasis oscillans* (Selys, 1877)

അരുവിത്തുമ്പി

- Long, slender damselfly with dark-blue capped pale blue eyes
- Thorax is black with lateral azure blue stripes
- Two black spots present on thorax laterally
- Abdomen is greenish yellow below and black dorsally up to segment 7
- Remaining segments are azure blue with apical black rings





# *Archibasis oscillans* (Selys, 1877)

അരുവിത്തുമ്പി

- Female is similar to the male, but more robust and paler in colours
- Abdominal segments 8 to 10 are in azure blue
- Segment 8 has one and 9 has two black dorsal spots



©Nitha Bose C

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# *Ceriagrion cerinorubellum* (Brauer, 1865)

## കനൽവാലൻ ചതുപ്പൻ

- Medium sized damselfly with greenish eyes
- Thorax is yellowish green
- Abdominal segments 1, 2, basal half of 3, apical half of 7 and segments 8 to 10 are orange
- Other segments are pale blue, marked black on dorsum



# *Ceriagrion cerinorubellum* (Brauer, 1865)

കനൽവാലൻ ചതുപ്പൻ

- Female is similar to the male; but more robust and with dull colours

♀





# *Ceriagrion chromothorax* Joshi & Sawant 2019

സിന്ധുഭൂമി ചതുപ്പൻ

- Medium sized damselfly with yellowish green eyes
- Thorax is chrome yellow
- Abdomen is long and slender; yellowish brown with dark markings on the dorsum of last segments



# *Ceriagrion chromothorax* Joshi & Sawant 2019

സിന്ധുദുർഗ് ചതുപ്പൻ

•Female similar to female *C.coromandelianum*, but can be distinguished by darker dorsum of terminal abdominal segments

♀



© [Dattaprasad Sawant](#)

# *Ceriagrion coromandelianum* (Fabricius, 1798)

നാട്ടുചതുപ്പൻ

- Medium sized damselfly with yellowish green eyes
- Thorax is olive green, paler on sides
- Abdomen is uniformly citron yellow





# *Ceriagrion coromandelianum* (Fabricius, 1798)

നാട്ടുചതുപ്പൻ

- Female is similar to the male; but more robust and in dull colours
- Thorax is more greenish and abdomen is golden yellow to brown



# *Ceriagrion olivaceum aurantiacum* Fraser, 1924

കരിമ്പച്ചതുപ്പൻ



- Medium sized damselfly with green eyes
- Overall colour mahogany red
- Abdomen is darker reddish-brown; segments 6, 7 & 8 smoky black on dorsum; segments 9 &10 pale
- Thinner and proportionately longer abdomen help to separate it from other *Ceriagrion* species

© Muneer Tholpetty



# *Ceriagrion olivaceum aurantiacum* Fraser, 1924

കരിമ്പച്ചതൂപ്പൻ

•Female has dull green thorax and darker abdomen compared to the male

♀



© Jisha Rajesh



# *Ceriagrion rubiae* Laidlaw, 1916

തീച്ചതുപ്പൻ

- Medium sized damselfly with olivaceous eyes, darker above
- Thorax is bright orange, paler on the sides
- Abdomen is rich orange in colour



# *Ceriagrion rubiae* Laidlaw, 1916

## തീച്ചതുപ്പൻ

- Female is similar to the male, but with duller colours; thorax can appear greenish in some individuals





# *Ischnura rubilio* Selys, 1876

## മഞ്ഞപ്പൂർമാണിക്യൻ

- Small damselfly with black capped green eyes
- Thorax is black, marked with olive green stripes
- Abdomen is rusty-yellow, except for segments 8 to 10, which are azure blue
- There is a large diamond-shaped spot on apical end of the dorsum side of segment 6
- Segment 7 is broadly bronzed black on the dorsum
- There is a broad black dorsal spot in segment 10

♂



# *Ischnura rubilio* Selys, 1876

## മഞ്ഞപ്പുൽമാണിക്യൻ

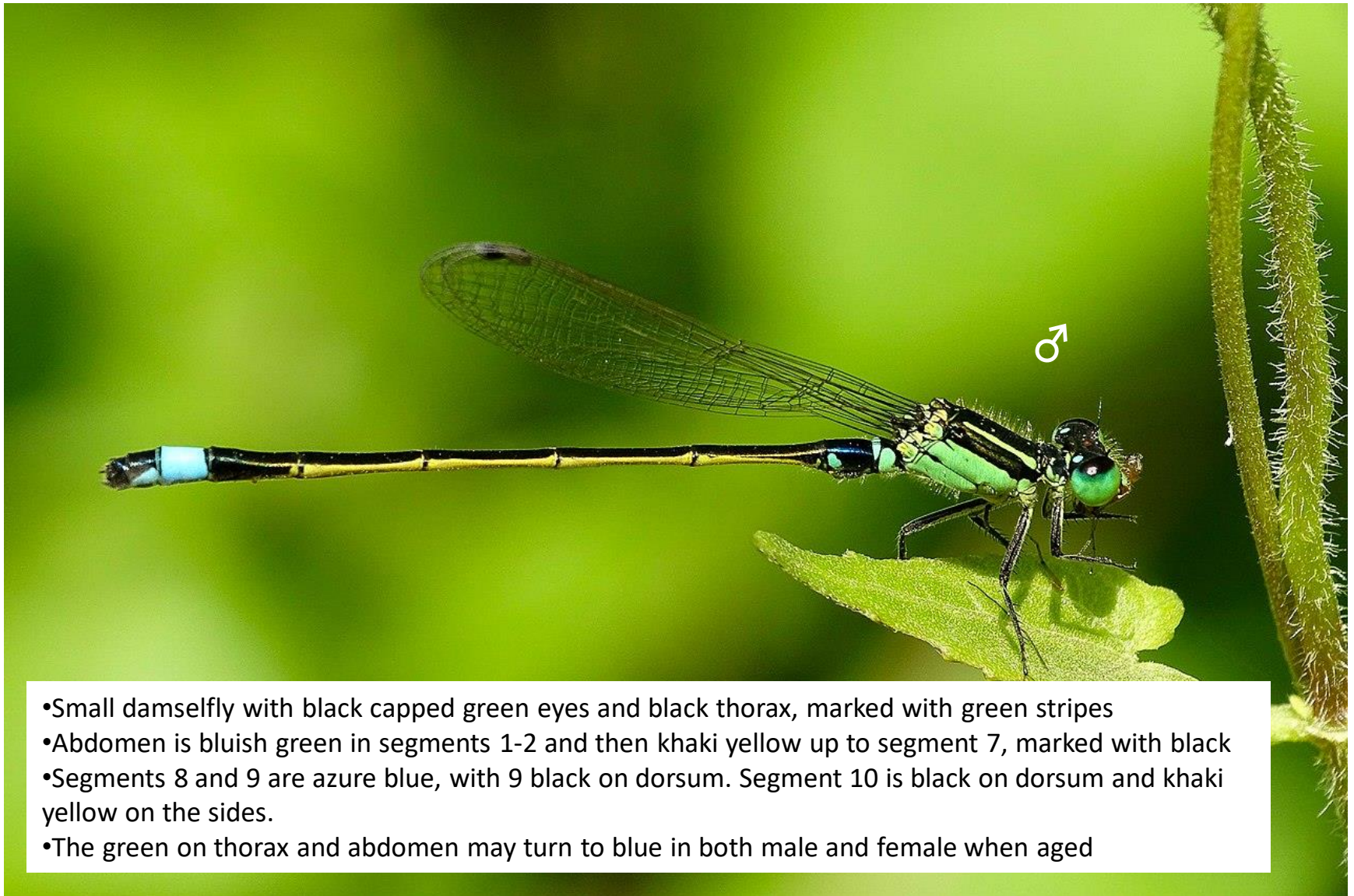
- Female is stouter and less conspicuously coloured
- Abdomen is marked with a broad black dorsal stripe extending the whole length
- Sides of the thorax are pale green and abdomen is pale red or pale yellow

♀



# *Ischnura senegalensis* (Rambur, 1842)

നീല പുൽമാണിക്യൻ



- Small damselfly with black capped green eyes and black thorax, marked with green stripes
- Abdomen is bluish green in segments 1-2 and then khaki yellow up to segment 7, marked with black
- Segments 8 and 9 are azure blue, with 9 black on dorsum. Segment 10 is black on dorsum and khaki yellow on the sides.
- The green on thorax and abdomen may turn to blue in both male and female when aged



# *Ischnura senegalensis* (Rambur, 1842)

നീല പുൽമാണിക്യൻ

- Female is more robust and exhibits several colour morphs
- In androchrome form, female is barely distinguishable from the male except by sexual characters

♀

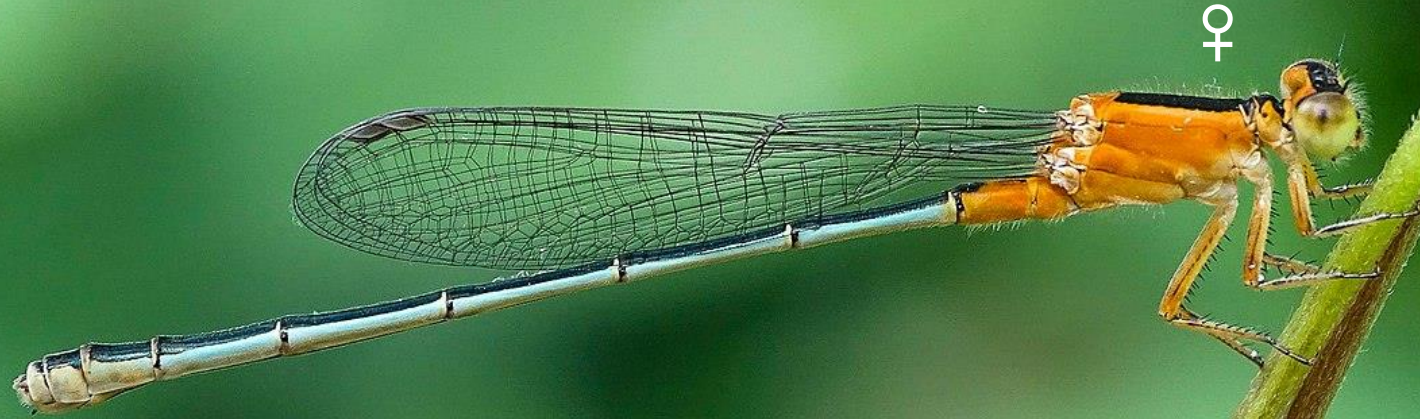




# *Ischnura senegalensis* (Rambur, 1842)

## നീല പുൽമാണിക്യൻ

- In gynochrome form, sides of the thorax are orange coloured, marked with black on dorsum
- All the abdominal segments are marked with black on dorsum
- Segments 1 and 2 are orange; 3 to 6 are pale blue on the sides



# *Mortonagrion varralli* Fraser, 1920

കരിയിലത്തുമ്പി



- Small damselfly with reddish brown capped grey eyes
- Thorax is reddish brown, marked with narrow pale blue stripes; greenish blue at base
- Abdomen is reddish brown with narrow pale blue basal annules; 8th segment has a broader sky blue basal annule



# *Mortonagrion varralli* Fraser, 1920

കരിയിലത്തുമ്പി

- Female is similar to the male; but marks and colours on thorax are more visible





# *Paracercion calamorum* (Ris, 1916)

## ചുട്ടിവാലൻ താമരത്തുമ്പി

- Small damselfly with brown capped yellowish green eyes
- Thorax is black on dorsum without any stripes
- Lateral sides of thorax are greenish blue; obscured by bluish white pruinescence in adults
- Abdomen is azure blue with broad black dorsal marks up to segment 7

♂



# *Paracercion calamorum* (Ris, 1916)

ചുട്ടിവാലൻ താമരത്തുമ്പി

- Female is similar to the male; but the sides of the abdomen are pale greenish yellow and segments 8 & 9 are broadly black on dorsum

♀





# *Paracercion malayanum* (Selys, 1876)

മലയൻ താമരത്തുമ്പി

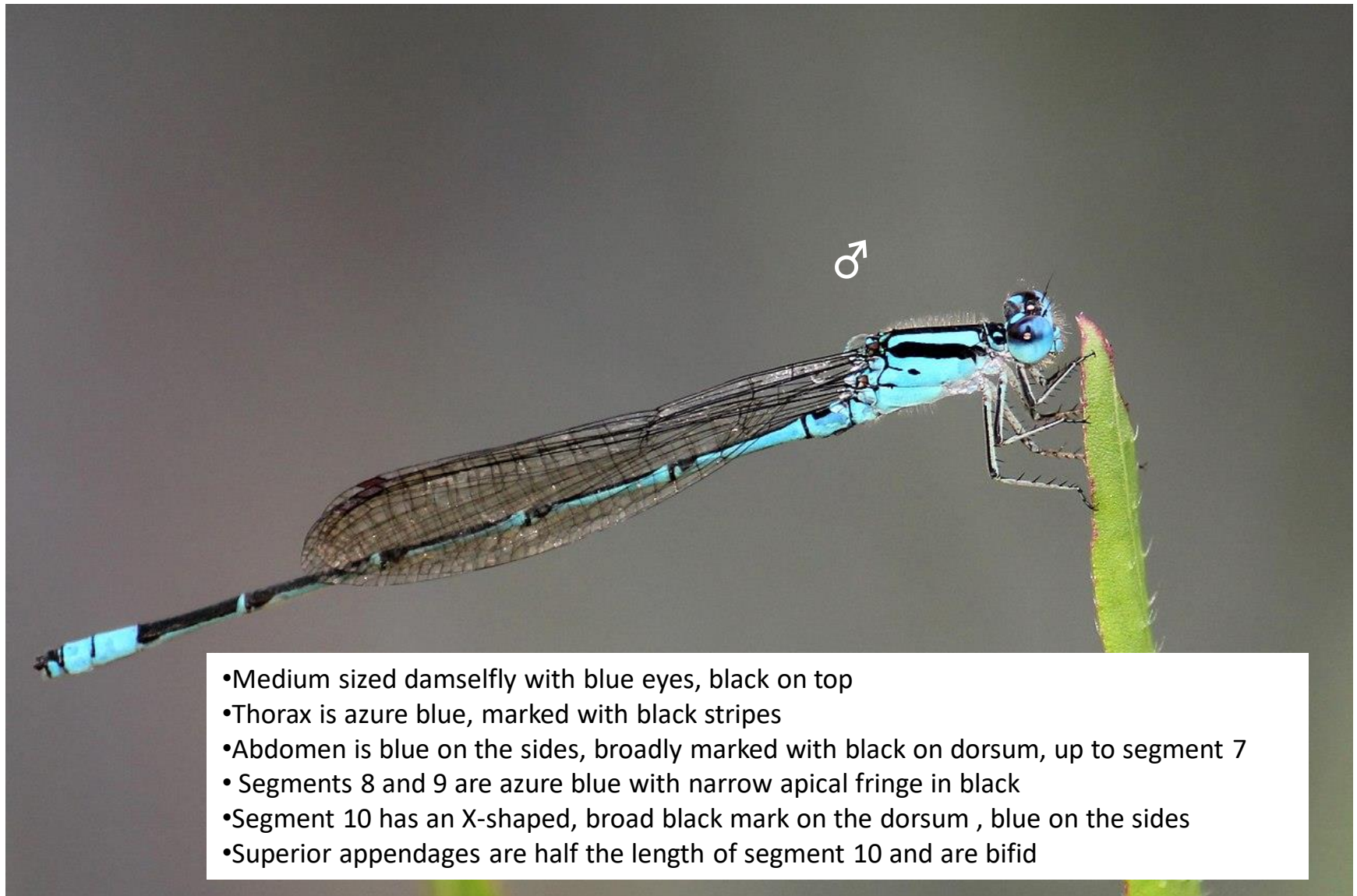


- Small damselfly with deep blue eyes
- Thorax is black on dorsum with very broad azure blue stripes
- Lateral sides of thorax are blue without any pruinescence
- Abdomen is azure blue with broad black dorsal marks up to segment 7
- Segment 2 has a distinct broad dorsal spot shaped like a thistle-head
- Female is similar to the male; but the sides of the abdomen are pale greenish yellow and segments 8 & 9 are broadly black on dorsum



# *Pseudagrion australasiae* Selys, 1876

കുറുവാലൻ പുത്താലി



- Medium sized damselfly with blue eyes, black on top
- Thorax is azure blue, marked with black stripes
- Abdomen is blue on the sides, broadly marked with black on dorsum, up to segment 7
- Segments 8 and 9 are azure blue with narrow apical fringe in black
- Segment 10 has an X-shaped, broad black mark on the dorsum , blue on the sides
- Superior appendages are half the length of segment 10 and are bifid

# *Pseudagrion australasiae* Selys, 1876

കുറുവാലൻ പുത്താലി



♀

- Female has greenish blue head and thorax
- Thin & wavy humeral stripe surrounded with an areola of golden green
- Abdomen is pale blue with dorsal black mark extended to segment 9

© Rison Thumboor



# *Pseudagrion decorum* (Rambur, 1842)

ഇളനീലി പുത്താലി



- Medium sized damselfly with bluish eyes, black above
- Thorax is bluish green, marked with narrow black stripes; azure blue on the sides; three thin stripes on mid-dorsum distinct
- Abdomen is azure blue with dorsal black mark up to segment 7
- Segments 8 to 10 are azure blue with apical black annules



# *Pseudagrion decorum* (Rambur, 1842)

ഇളനീലി പുത്താലി

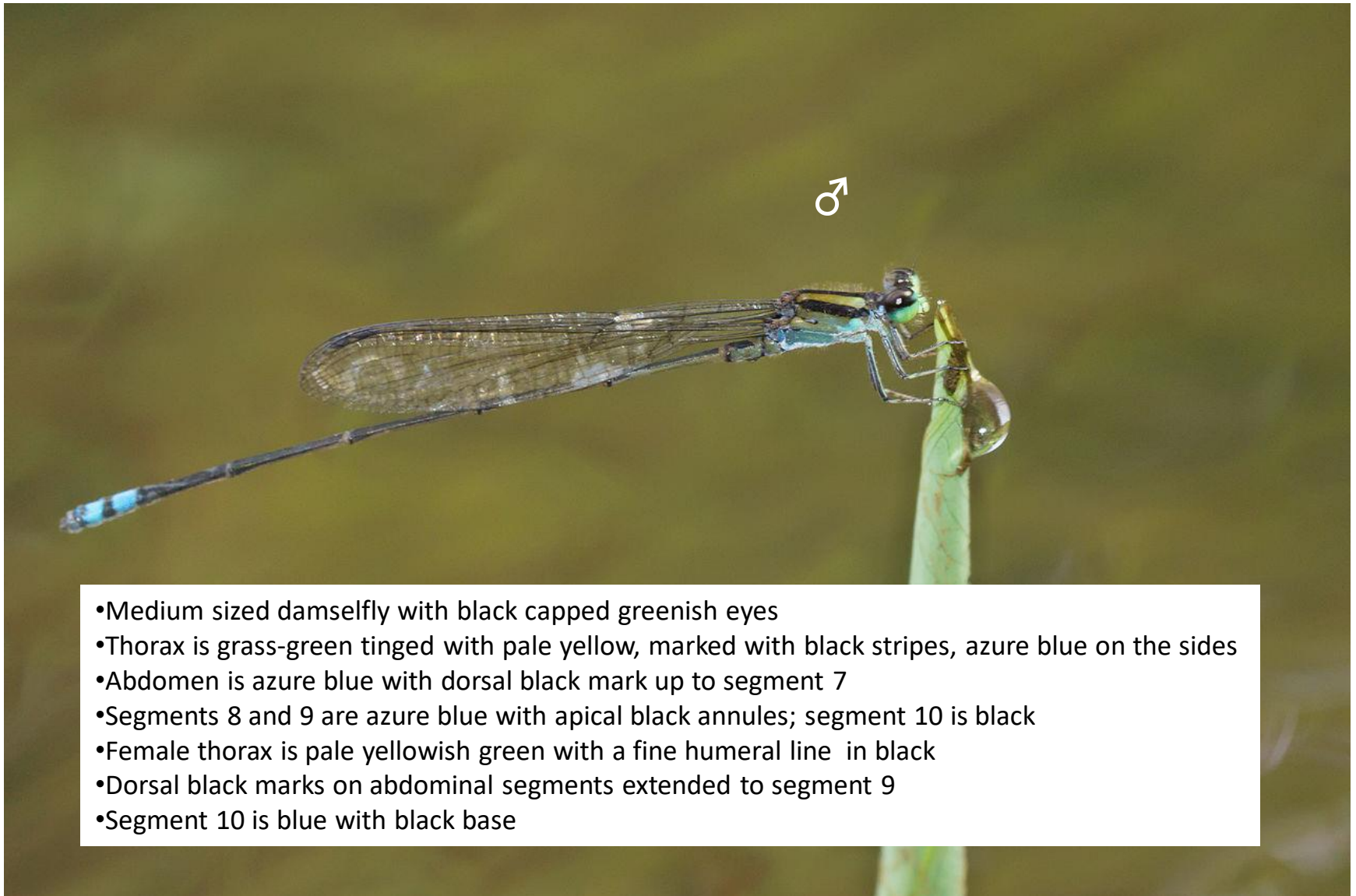
- Female has greenish yellow head and thorax
- The three thin stripes on mid-dorsum of thorax often visible
- Abdomen is pale blue with dorsal black mark extended to segment 9



♀

# *Pseudagrion indicum* Fraser, 1924

മഞ്ഞവരയൻ പുത്താലി



- Medium sized damselfly with black capped greenish eyes
- Thorax is grass-green tinged with pale yellow, marked with black stripes, azure blue on the sides
- Abdomen is azure blue with dorsal black mark up to segment 7
- Segments 8 and 9 are azure blue with apical black annules; segment 10 is black
- Female thorax is pale yellowish green with a fine humeral line in black
- Dorsal black marks on abdominal segments extended to segment 9
- Segment 10 is blue with black base

# *Pseudagrion indicum* Fraser, 1924

മഞ്ഞവരയൻ പുത്താലി





# *Pseudagrion malabaricum* Fraser, 1924

കാട്ടുപുത്താലി



- Medium sized damselfly with blue eyes, black on top
- Thorax is azure blue, marked with black stripes
- Abdomen is blue on the sides, broadly marked with black on dorsum, up to segment 7
- Segments 8 and 9 are azure blue with narrow apical annules in black
- Segment 10 is black on dorsum and blue on the sides
- Superior appendages are smaller than segment 10, but not as small as those of *Pseudagrion australasiae* and are not bifid

© Vivek Chandran A

# *Pseudagrion malabaricum* Fraser, 1924

കാട്ടുപുത്താലി

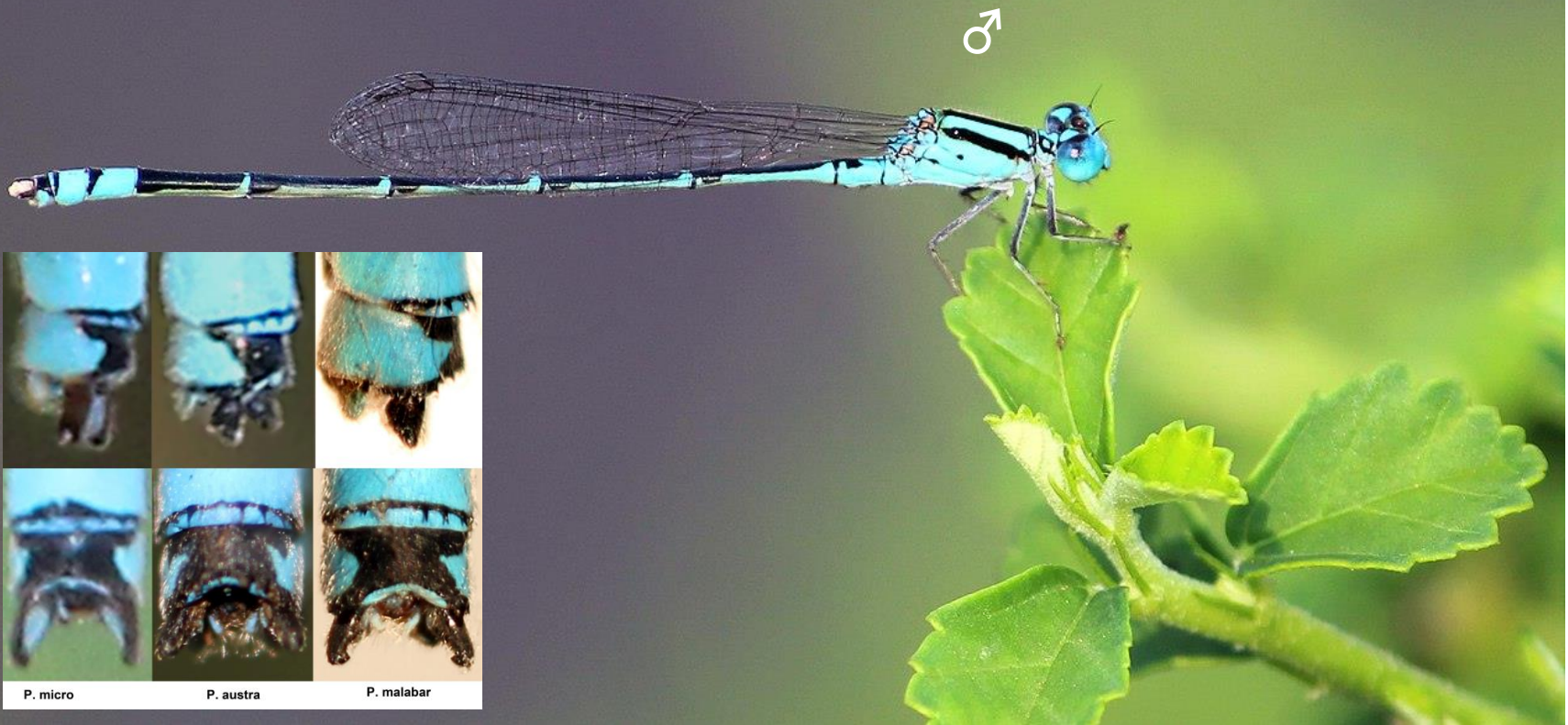


- Female has greenish blue head and thorax
- The thick humeral stripe is surrounded with an areola of golden green
- Abdomen is pale blue with dorsal black mark extended to segment 9

# *Pseudagrion microcephalum* (Rambur, 1842)

## നാട്ടുപുത്താലി

- Medium sized damselfly with blue eyes, black on top
- Thorax is azure blue, marked with black stripes
- Abdomen is blue on the sides, broadly marked with black on dorsum, up to segment 7
- Segments 8 and 9 are azure blue; 8 with a thick and 9 with a thin apical annule in black
- Segment 10 is black on dorsum and blue on the sides
- Superior appendages bifid, of the same length of segment 10. They have a blue 'shelf' on the inside





# *Pseudagrion microcephalum* (Rambur, 1842)

നാട്ടുപുത്താലി



- Female has bluish green head and thorax, suffused with orange on dorsum and in humeral area
- Black marks on thorax are similar to the male; but very narrow
- Abdomen is pale blue with dorsal black stripe extending to segment 9

# *Pseudagrion rubriceps* Selys, 1876

ചെമ്മുഖപ്പുത്താലി

- Medium sized damselfly with bright orange face and eyes, yellowish below
- Thorax is olive green, marked with black stripes; azure blue on the sides
- Abdomen is pale blue with dorsal black mark extended to segment 7
- Segment 8 has a broad apical spot
- Segments 9 and 10 are azure blue without any marks





# *Pseudagrion rubriceps* Selys, 1876

ചെമ്മുഖപ്പുത്താലി

- Eyes, face and thorax of the female is yellowish green, marked as in the male
- Colour of the abdomen is similar to the male; but paler
- Segments 8 and 9 are also black with fine apical blue rings
- Segment 10 is pale blue





# Dragonfly Families (Suborder Anisoptera)



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**Aeshnidae (Darners)**



© Rison Thumboor

**Gomphidae (Clubtails)**



© Subramanian K. A.

**Chlorogomphidae (Mountain Hawks)**



© Rison Thumboor

**Macromiidae (Cruisers)**



© Charesh C K

**Corduliidae (Emeralds)**



© Jeevan Jose

**Libellulidae (Skimmers)**



© David V. Raju

**Genera *Incertae sedis* ("Enigmatic taxa")**

# Aeshnidae (Darners)

(സൂചിവാലൻ കല്ലൻതുമ്പികൾ)

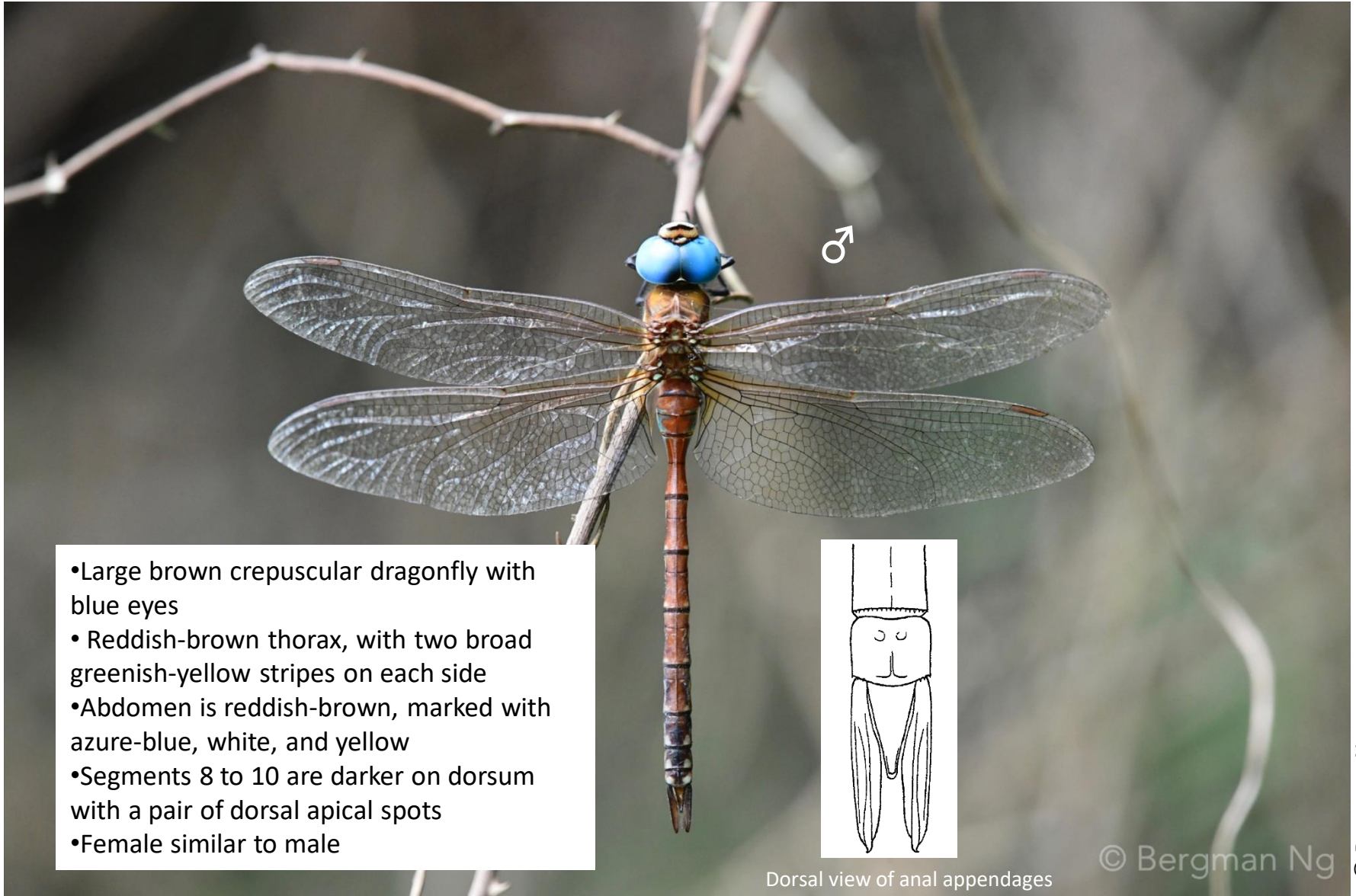
- Largest and fastest flying dragonflies on the planet that fly continuously in active hours
- Perch vertically with wings wide open while roosting
- Eyes nearly cover their heads, touching in the midline
- Middle lobe of labium large and fissured
- Having long and thin abdomen, usually marked with blue or green
- Transparent wings, sometimes with hindwing patches
- Mostly breeds in marshes, ponds and lakes where eggs are deposited among vegetation in water or close by, using ovipositors as in damselflies



© Rison Thumbor

# *Anaciaeschna jaspidea* (Burmeister, 1839)

തുരുമ്പൻ രാജൻ



- Large brown crepuscular dragonfly with blue eyes
- Reddish-brown thorax, with two broad greenish-yellow stripes on each side
- Abdomen is reddish-brown, marked with azure-blue, white, and yellow
- Segments 8 to 10 are darker on dorsum with a pair of dorsal apical spots
- Female similar to male

Dorsal view of anal appendages

© Bergman Ng

© Bergman Ng

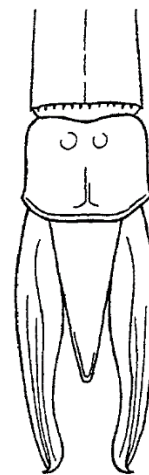


# *Anaciaeschna martini* (Selys, 1897)

ചോലരാജൻ തുമ്പി

• *Anaciaeschna donaldi* is a junior synonym

- Large reddish brown dragonfly with blue eyes
- Blackish-brown thorax, with two broad azure blue stripes on each side
- Black spots at the bases of hindwings
- Abdomen dark reddish brown to black; segment 2 & 3 with a broad azure blue stripe



Dorsal view of anal appendages

# *Anaciaeschna martini* (Selys, 1897)

ചോലരാജൻ തുമ്പി

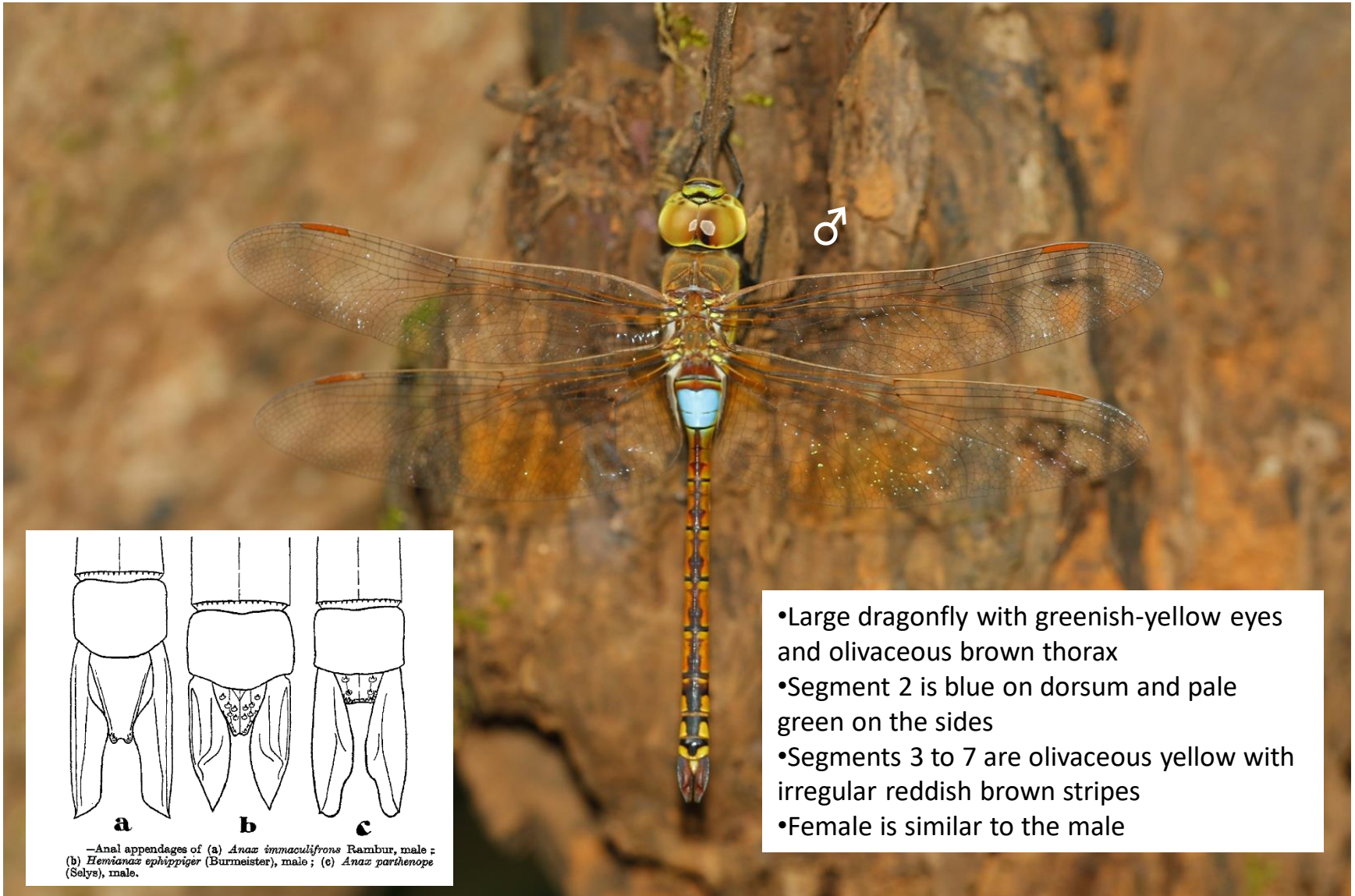


- Female similar, but thorax marked with apple green; wings deeply and evenly tinted with amber yellow and blackish brown at extreme bases



# *Anax ephippiger* (Burmeister, 1839)

തൂരുമ്പൻ ചാത്തൻ





# *Anax guttatus* (Burmeister, 1839)

മരതകരാജൻ



- Big dragonfly with greenish eyes and pale green thorax
- Abdomen is dark brown with blue and orange markings on the sides
- Segment 2 is pale green on the sides and blue on the dorsum
- Segment 3 is blue on the sides
- Segments 4 to 7 are with several spots
- The number of spots are lesser in segments 8 to 10

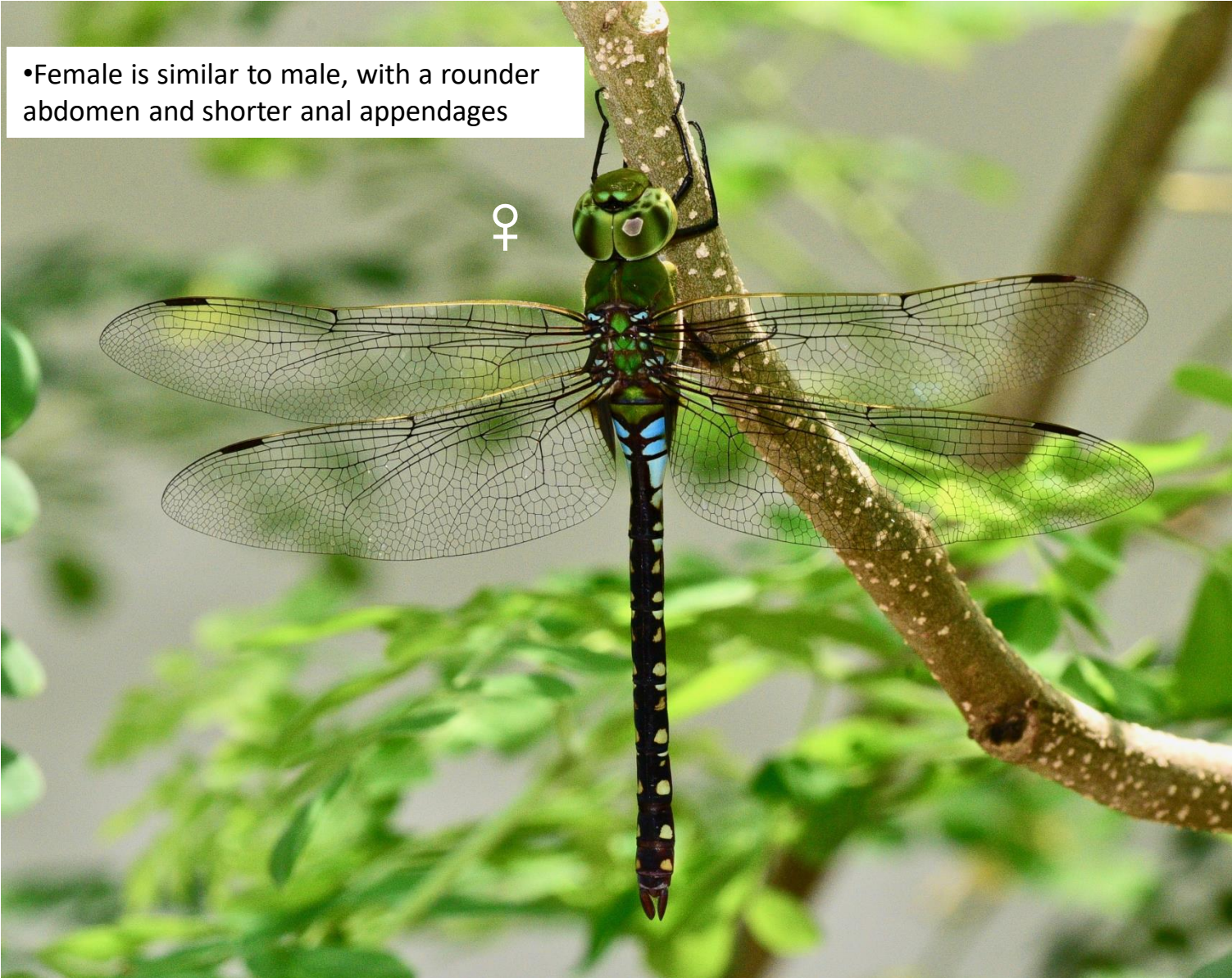


# *Anax guttatus* (Burmeister, 1839)

മരതകരാജൻ

•Female is similar to male, with a rounder abdomen and shorter anal appendages

♀

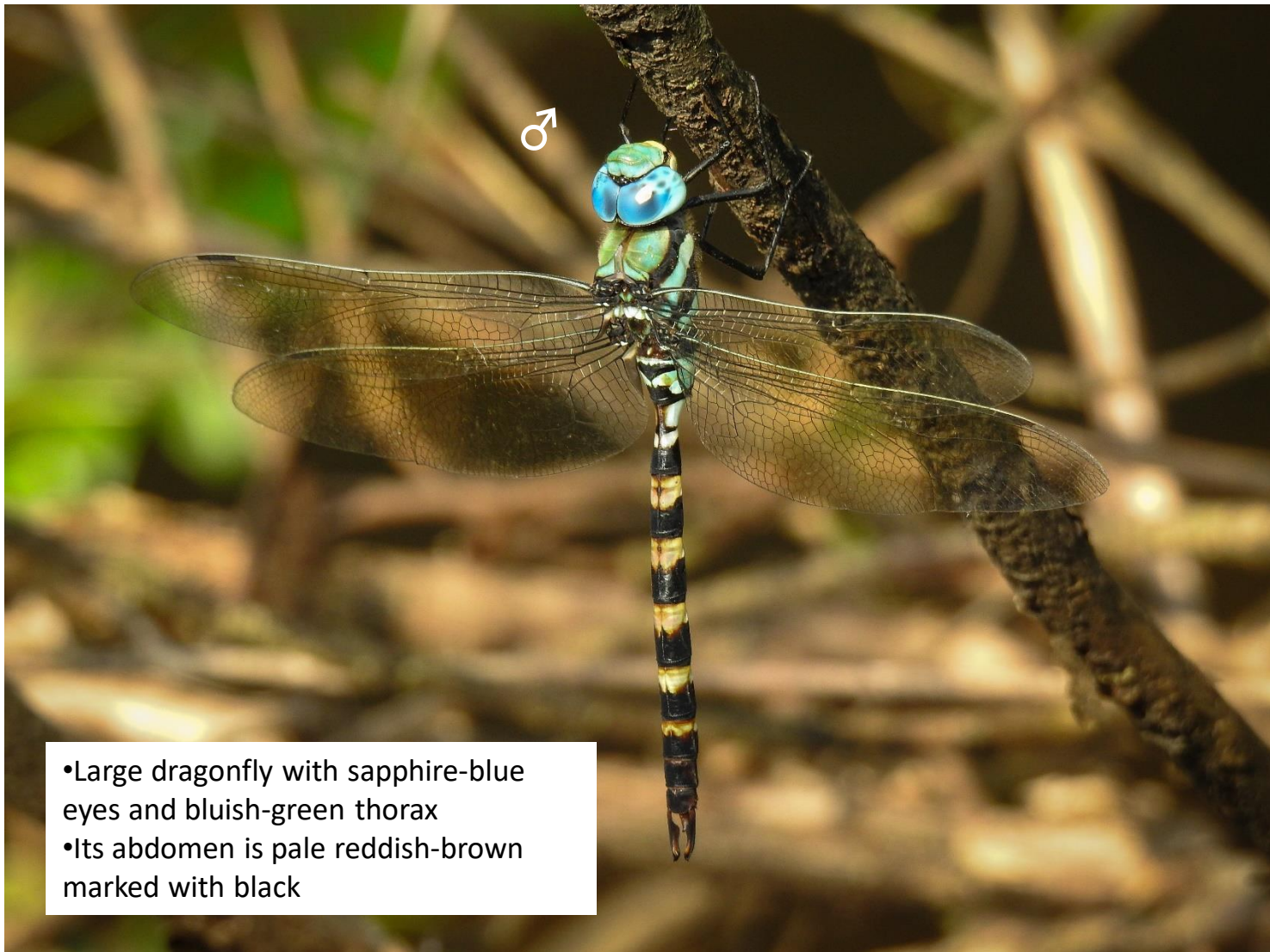


© Balachandran V



# *Anax immaculifrons* Rambur, 1842

നീലരാജൻ തുമ്പി



- Large dragonfly with sapphire-blue eyes and bluish-green thorax
- Its abdomen is pale reddish-brown marked with black

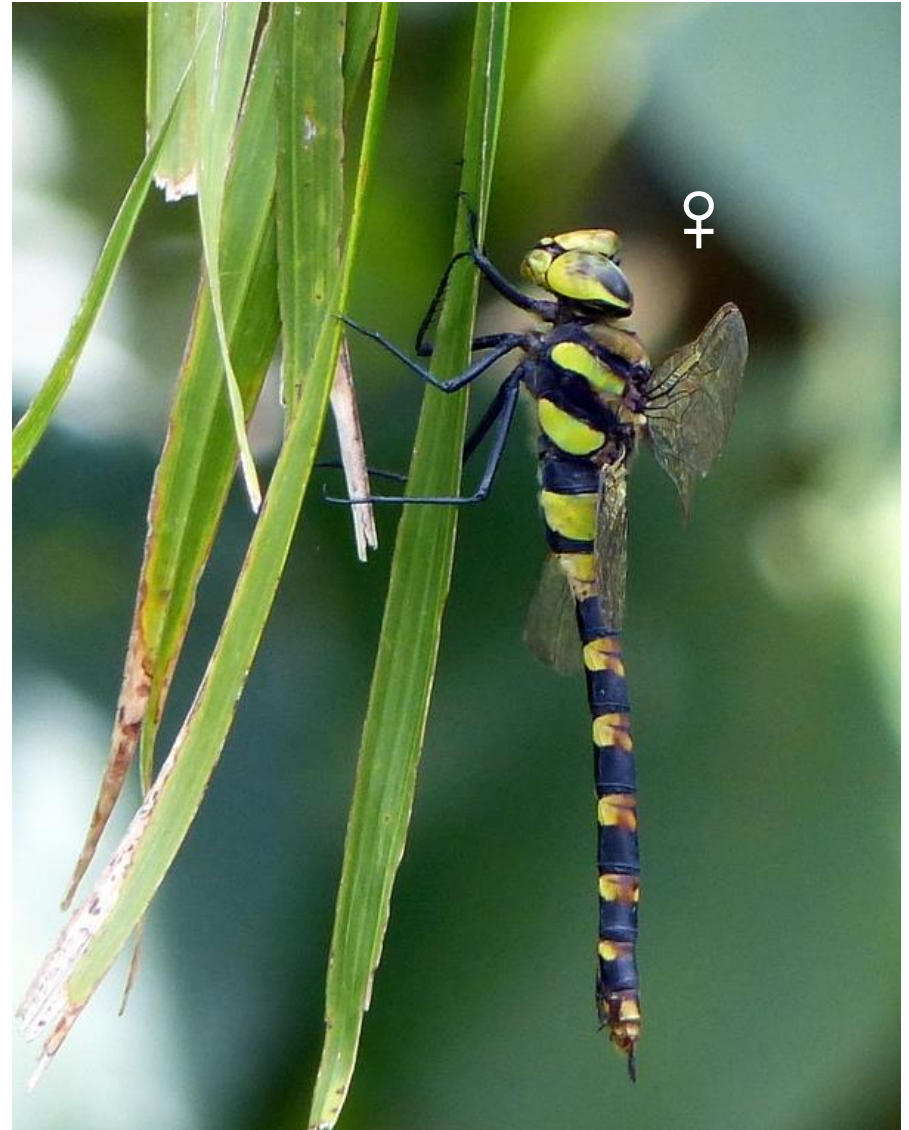
© Vivek Chandran A



# *Anax immaculifrons* Rambur, 1842

നീലരാജൻ തുമ്പി

- Female is similar to the male, but the bluish green is replaced by pale greenish yellow on thorax and base of abdomen
- Dorsum of thorax is pale brown instead of blue



© Balachandran V

# *Anax indicus* Lieftinck, 1942

പിതാംബരൻ തുമ്പി



© Firos A K



# *Anax indicus* Lieftinck, 1942

പിതാംബരൻ തുമ്പി





# *Anax parthenope* (Selys, 1839)

തവിട്ട് രാജൻ

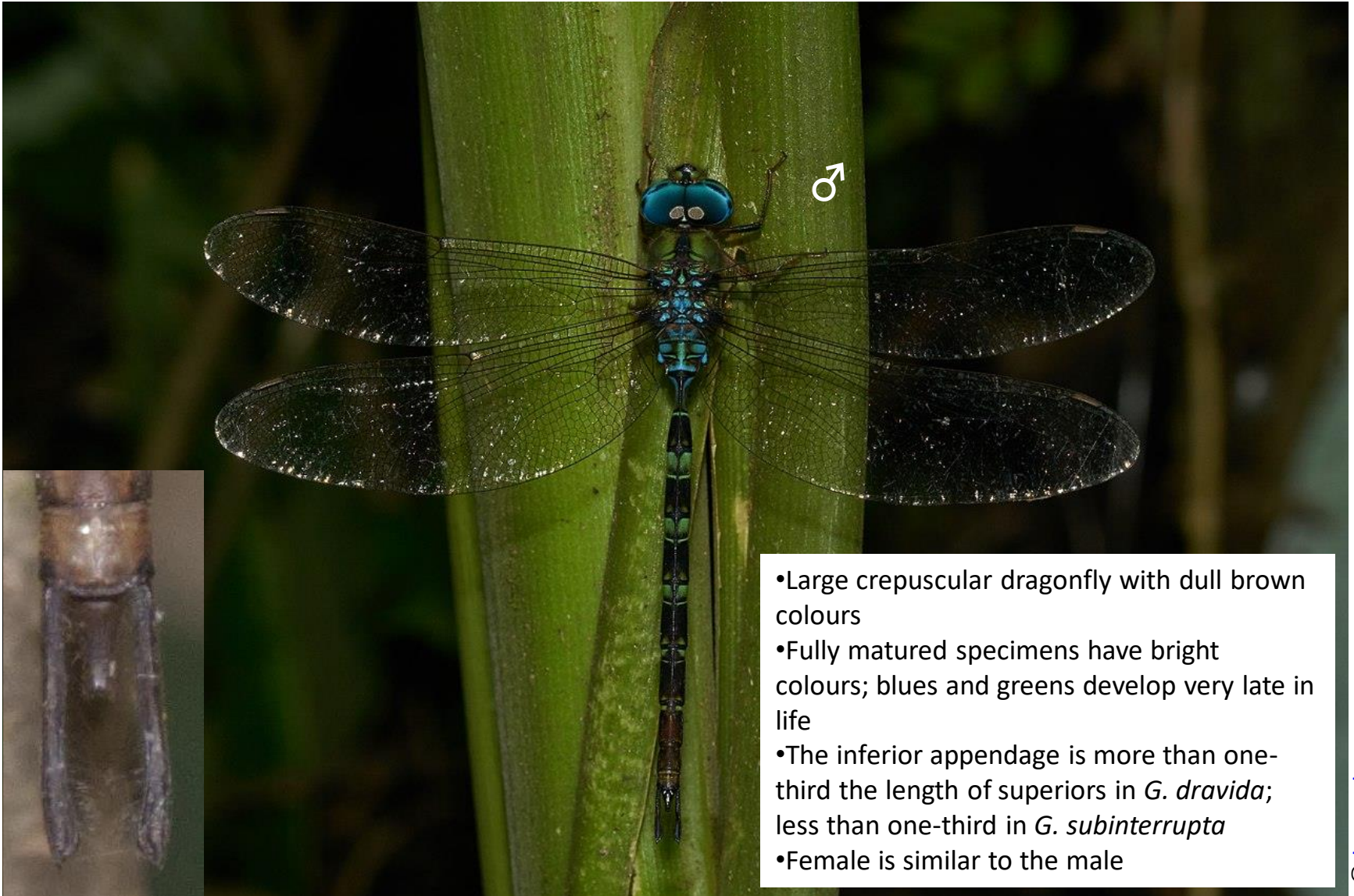


- Large dragonfly with greenish yellow eyes and olivaceous brown thorax
- Has a blue saddle at S2 and S3 which wrap around the abdomen
- Segments 4 to 9 have an irregular black mid-dorsal stripe
- Female is similar to the male

© Pankaj Koparde

# *Gynacantha dravida* Lieftinck, 1960

സൂചിവാലൻ രാക്കൊതിച്ചി



- Large crepuscular dragonfly with dull brown colours
- Fully matured specimens have bright colours; blues and greens develop very late in life
- The inferior appendage is more than one-third the length of superiors in *G. dravida*; less than one-third in *G. subinterrupta*
- Female is similar to the male



# *Gynacantha dravida* Lieftinck, 1960

സൂചിവാലൻ രാക്കൊതിച്ചി





# *Gynacantha millardi* Fraser, 1920

## തത്തമ്മത്തുമ്പി

- Earlier, the species occurring in Kerala was mistakenly identified as *Gynacantha bayadera*; existence of *G.bayadera* in Kerala is doubtful



- Slender dragonfly with green thorax and pale brown abdomen on the dorsum
- Abdomen has no distinct constriction (The very similar *G.bayadera* has a constriction on segment 3)
- Segments 1–3 are grass green on the sides



# *Gynacantha millardi* Fraser, 1920

തത്തമ്മത്തുമ്പി



Rison Thumboor

© Rison Thumboor

# Gomphidae (Clubtails)

(കടുവാത്തുമ്പികൾ)

- Large or medium sized dragonflies
- Most males have a club-like widening of the end of the abdomen
- Perch flat or with raised abdomen; frequently make quick, short flights
- The eyes are well separated and large
- Generally black, marked with yellow or green
- Transparent wings without any colour patches
- Mostly breed in streams and rivers
- Larvae usually burrow in the sediment at the bottom of the water body



© Jeevan Jose



# *Acrogomphus fraseri* Laidlaw, 1925

പൊക്കൻ കടുവ



- Large, robustly built glossy black dragonfly marked with bright citron yellow
- Thorax black, marked with bright citron yellow
- Wings pale saffron throughout, deepening gradually to a golden yellow near the bases
- Abdomen marked with bright citron yellow; segments 3 to 6 each with a pair of sub-dorsal basal spots decreasing in size; segment 7 with basal half yellow; segment 8 with a sub-basal spot on each side and segment 9 with a similar but much smaller spot
- Anal appendages: superiors dark reddish brown, almost black; inferiors black

© Umesh Pavukandy



# *Burmagomphus laidlawi* Fraser, 1924

ചതുരവാലൻ കടുവ

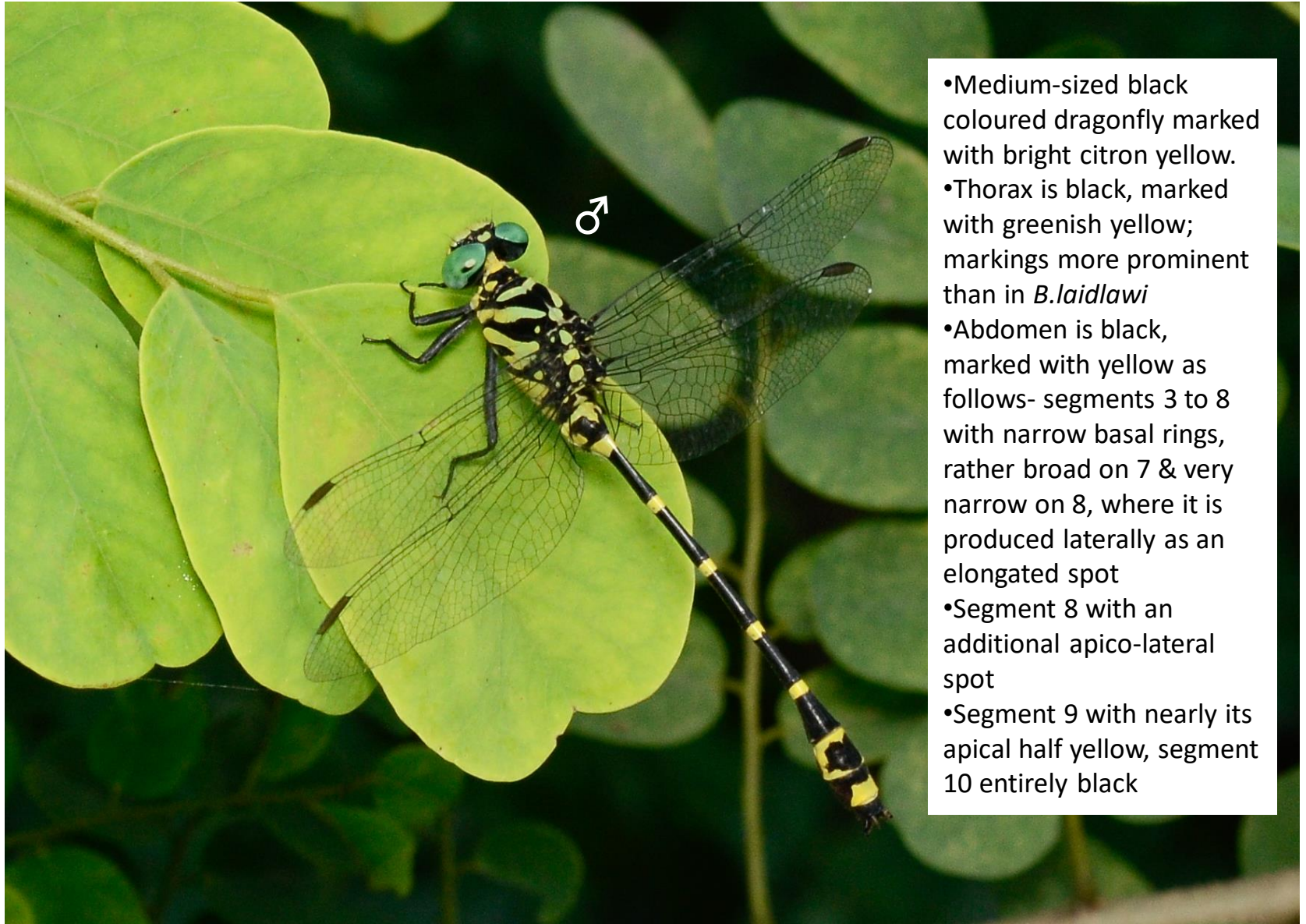


- Medium-sized dragonfly with bottle-green eyes
- Thorax is black, marked with greenish-yellow
- Abdomen is black, marked with yellow baso-lateral lunules on segments 4 to 6
- Segment 7 has a broad basal ring
- Segment 9 has its apical half yellow
- Segments 8 and 10 are unmarked



# *Burmagomphus pyramidalis* Laidlaw, 1922

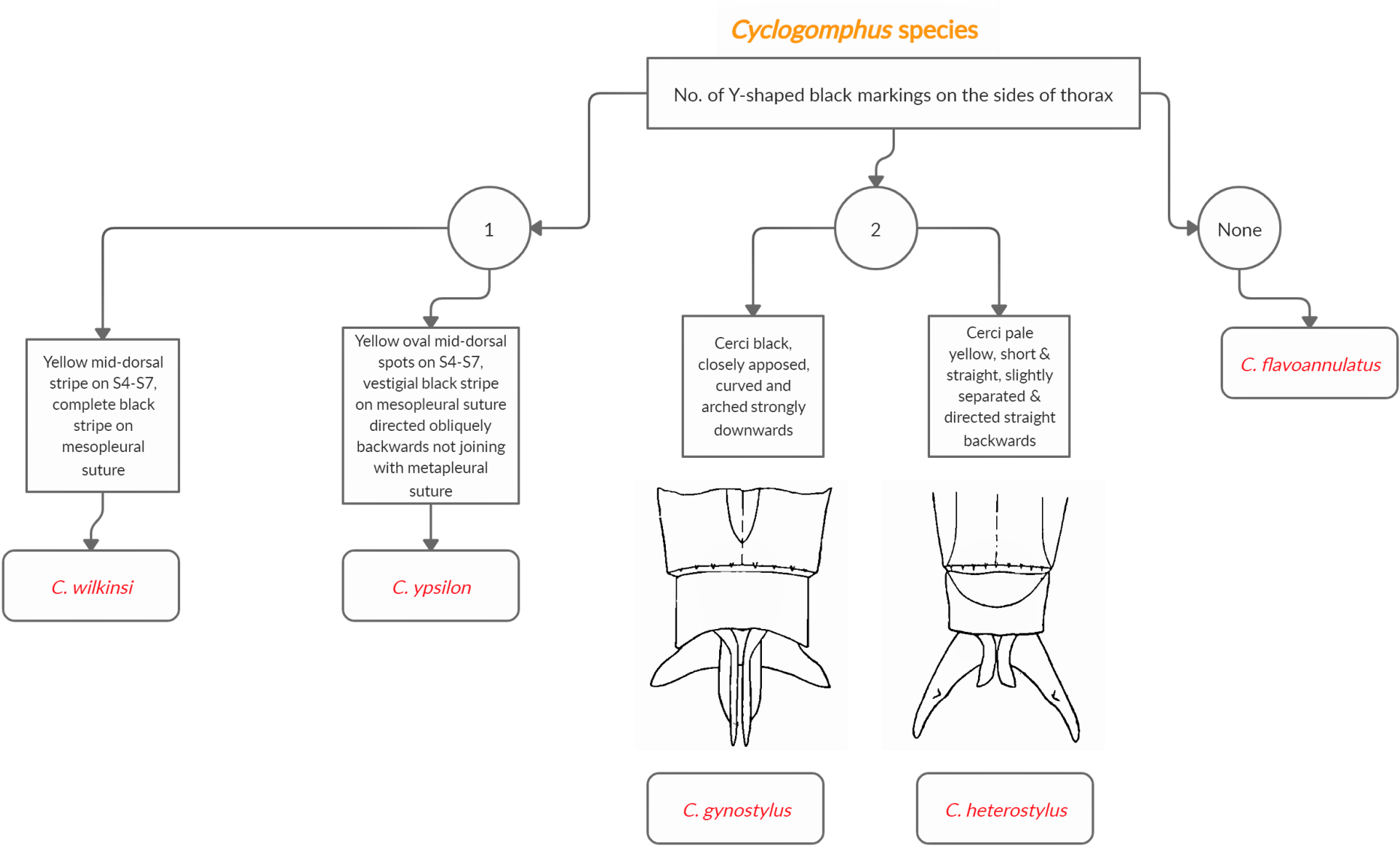
പൂള്ളി ചതുരവാലൻ കടുവ



- Medium-sized black coloured dragonfly marked with bright citron yellow.
- Thorax is black, marked with greenish yellow; markings more prominent than in *B.laidlawi*
- Abdomen is black, marked with yellow as follows- segments 3 to 8 with narrow basal rings, rather broad on 7 & very narrow on 8, where it is produced laterally as an elongated spot
- Segment 8 with an additional apico-lateral spot
- Segment 9 with nearly its apical half yellow, segment 10 entirely black



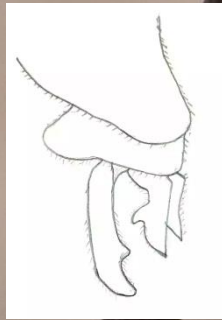
**Cyclogomphus species:** Medium-sized gomphids endemic to peninsular India and Sri Lanka; characterised by very conspicuously enlarged genital lobe of the male (in the 2<sup>nd</sup> abdominal segment) and long pterostigma.



# *Cyclogomphus flavoannulatus* Rangnekar et al, 2019

## മഞ്ഞ വിശനിവാലൻ കടുവ

- Medium-sized black and yellow dragonfly with green eyes
- Distinct broad yellow rings in abdominal segments S3–S7
- The 2 broad black stripes on thorax do not acquire 'Y' shapes



Anal appendages- dorsal & left lateral views

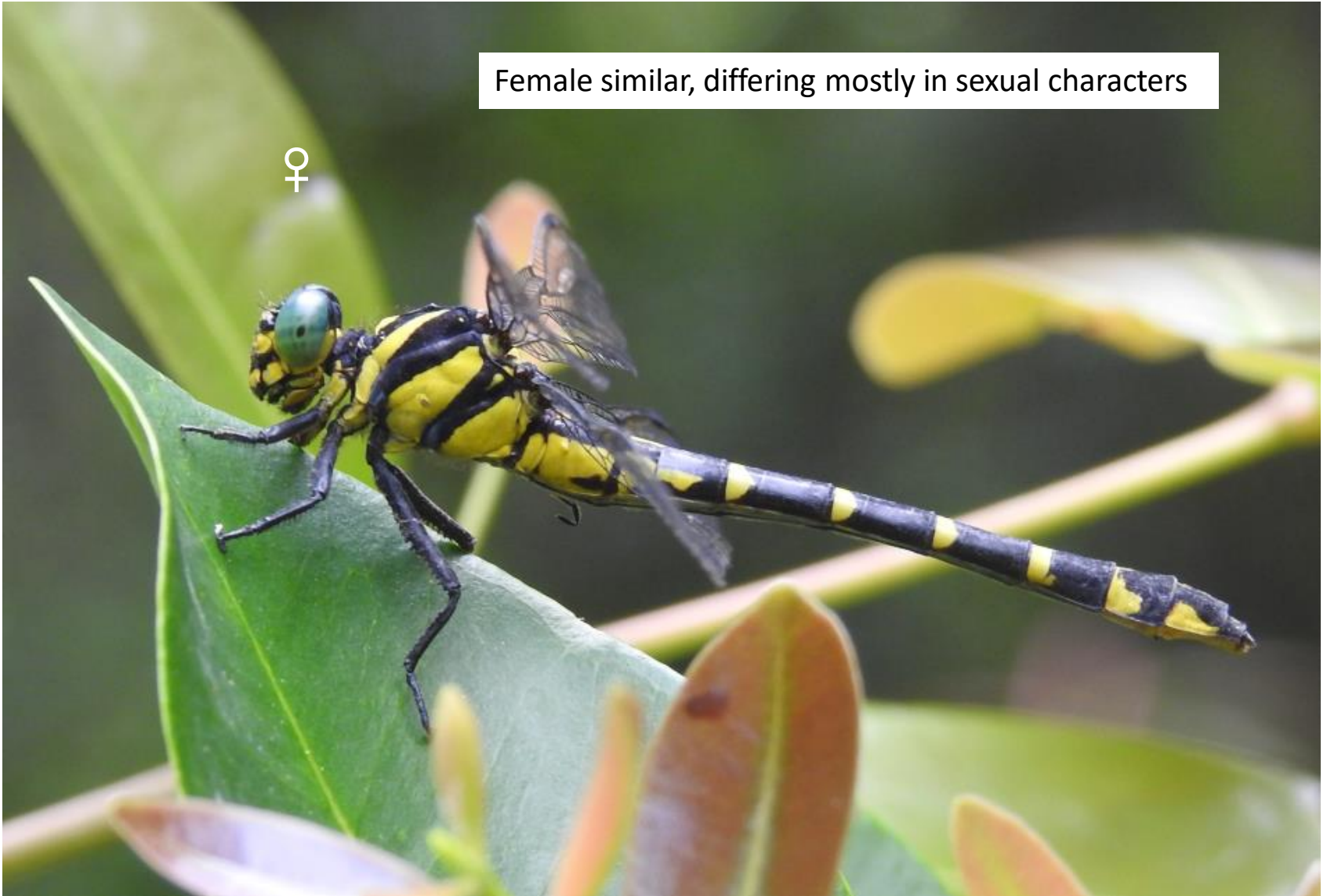
Teneral male

# *Cyclogomphus flavoannulatus* Rangnekar et al, 2019

മഞ്ഞ വിശനിവാലൻ കടുവ

Female similar, differing mostly in sexual characters

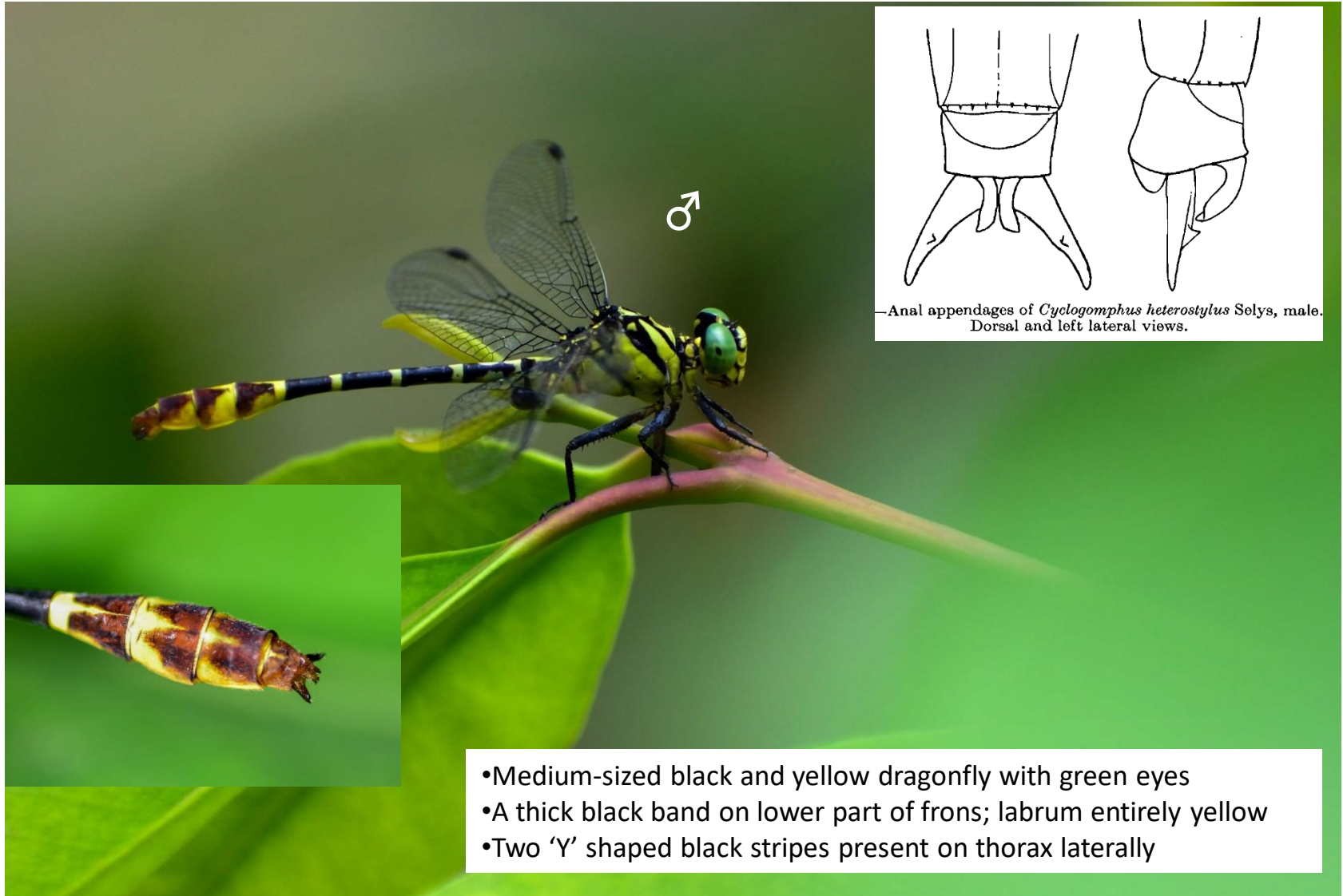
♀





# *Cyclogomphus heterostylus* Selys, 1854

വിശ്നിവാലൻ കടുവ



- Medium-sized black and yellow dragonfly with green eyes
- A thick black band on lower part of frons; labrum entirely yellow
- Two 'Y' shaped black stripes present on thorax laterally

# *Cyclogomphus heterostylus* Selys, 1854

വിശ്നിവാലൻ കടുവ

- Female is similar to the male, differing mostly in sexual characters



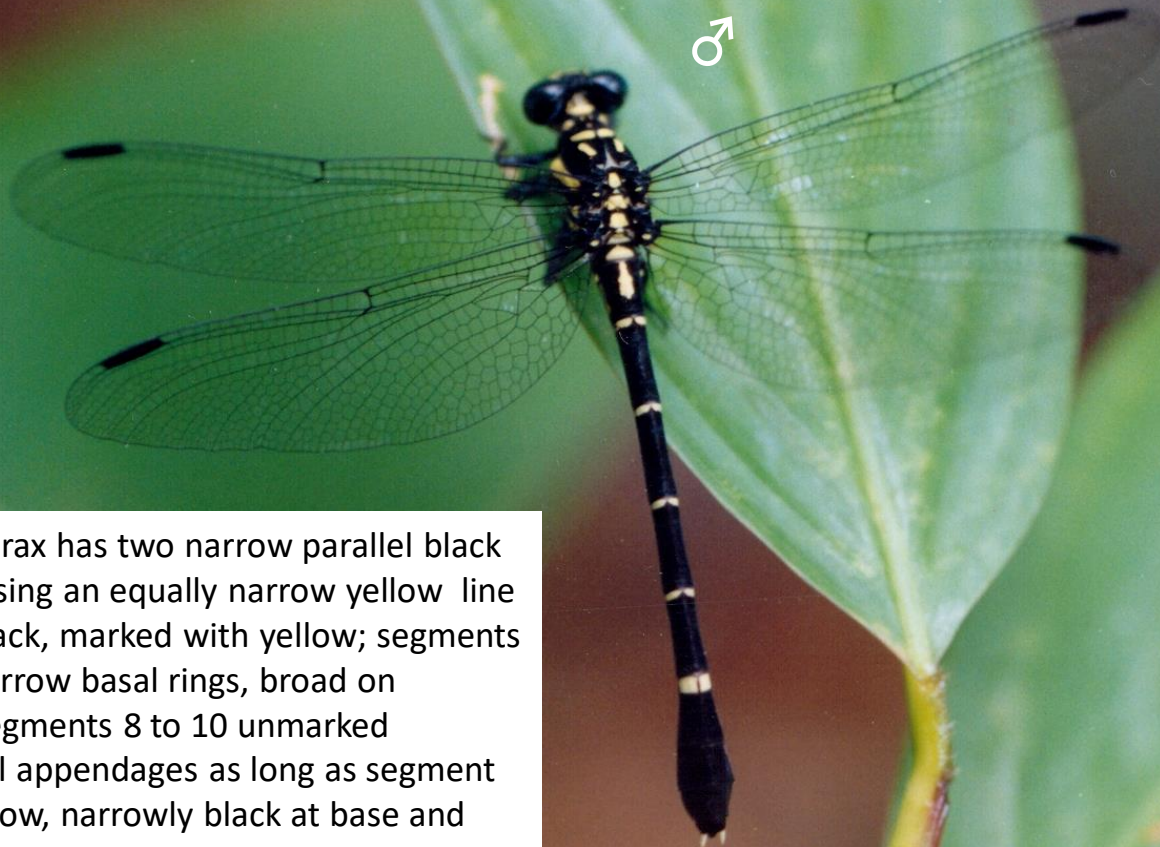
© Balachandran V



# *Davidioides martini* Fraser, 1924

## സൈരന്ധ്രീക്കടവ

- Medium sized glossy black dragonfly marked with bright citron yellow.
- Thorax black on dorsum, yellow on the sides, a slightly interrupted yellow mesothoracic collar, and slightly oblique antehumeral stripes separated widely from the collar below



- Laterally, thorax has two narrow parallel black stripes, enclosing an equally narrow yellow line
- Abdomen black, marked with yellow; segments 3 to 6 with narrow basal rings, broad on segment 7, segments 8 to 10 unmarked
- Superior anal appendages as long as segment 10, bright yellow, narrowly black at base and widely spread apart



# *Gomphidia kodaguensis* Fraser, 1923

പുഴക്കുടുംബ



- Large dragonfly with bottle-green eyes
- Thorax is black, marked with yellow
- Abdomen is black, marked with yellow
- Segments 3 to 6 have dorsal basal spots
- Segment 7 has the basal half yellow
- Segment 8 has a long transverse basal spot
- Segment 9 is unmarked; segment 10 has a dorsal spot

© Jeevan Jose

# *Gomphidia kodaguensis* Fraser, 1923

പുഴക്കുടുംബ

- Female is similar to the male, differing only in sexual characters





# *Heliogomphus promelas* (Selys, 1873)

കൊമ്പൻ കടുവ



- Medium-sized dragonfly with bottle-green eyes
- Thorax is black, marked with greenish-yellow
- Abdomen is black, marked with greenish yellow narrow mid-dorsal stripe on segments 1 to 5
- Segment 7 has a ring on its basal third and a dorsal spot on segment 8
- Remaining segments are entirely black

© Reji Chandran



# *Ictinogomphus rapax* (Rambur, 1842)

നാട്ടുകുടുംബം



- Large dragonfly with bluish grey eyes
- Thorax is black, marked with yellow
- Abdomen is black, marked with yellow dorsal spots up to segment 6
- Segment 7 and 8 have the basal half yellow
- There is a leaf like expansion on both sides of segment 8
- Segment 9 and 10 are mostly black

# *Ictinogomphus rapax* (Rambur, 1842)

നാട്ടുകുടുംബം

- Female is similar to the male, but much stouter and shorter

♀

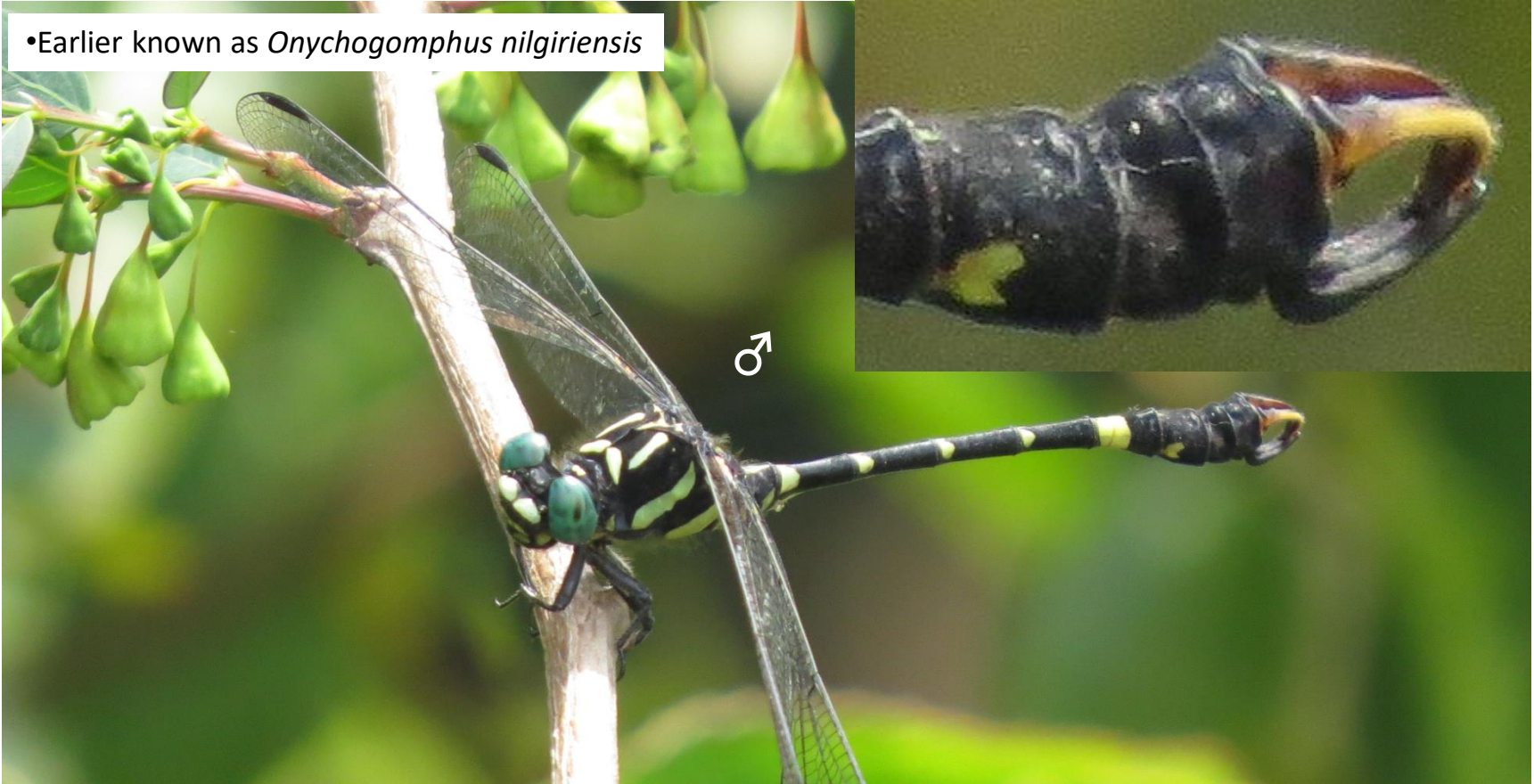




# *Lamelligomphus nilgiriensis* (Fraser, 1922)

നീലഗിരി നഖവാലൻ

•Earlier known as *Onychogomphus nilgiriensis*

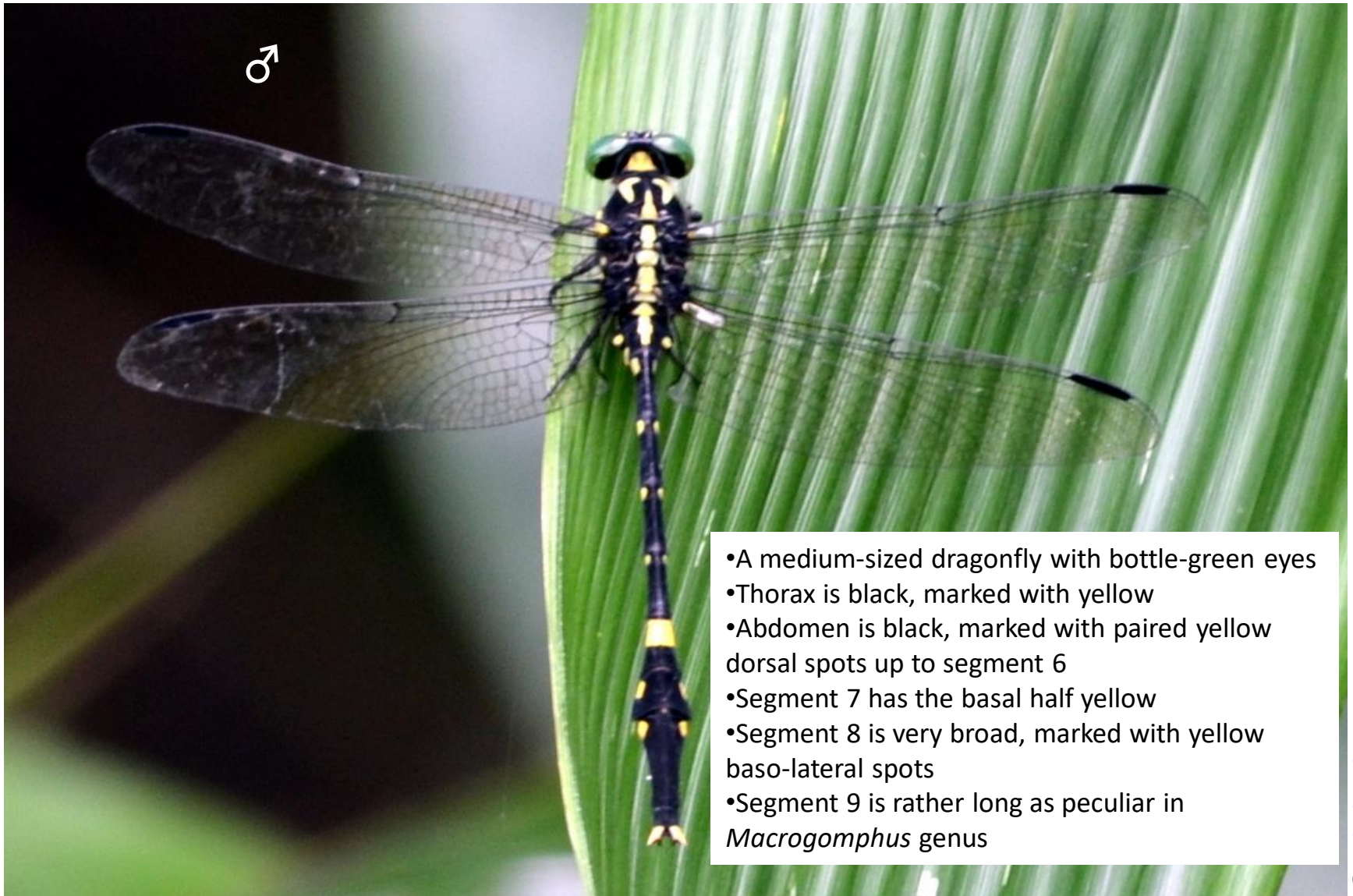


- Medium-sized dragonfly with bottle-green eyes.
- Thorax and abdomen are black, marked with yellow
- Segment 3 has a large basal spot; segments 4 to 6 have triangular spots. Segment 7 has its basal half yellow; Segment 8 has only a basal spot on the sides. Segments 9 and 10 are unmarked
- Anal appendages are black; but the outer and upper surfaces of the superiors are bright yellow



# *Macrogomphus wynaadicus* Fraser, 1924

വയനാടൻ കടുവ

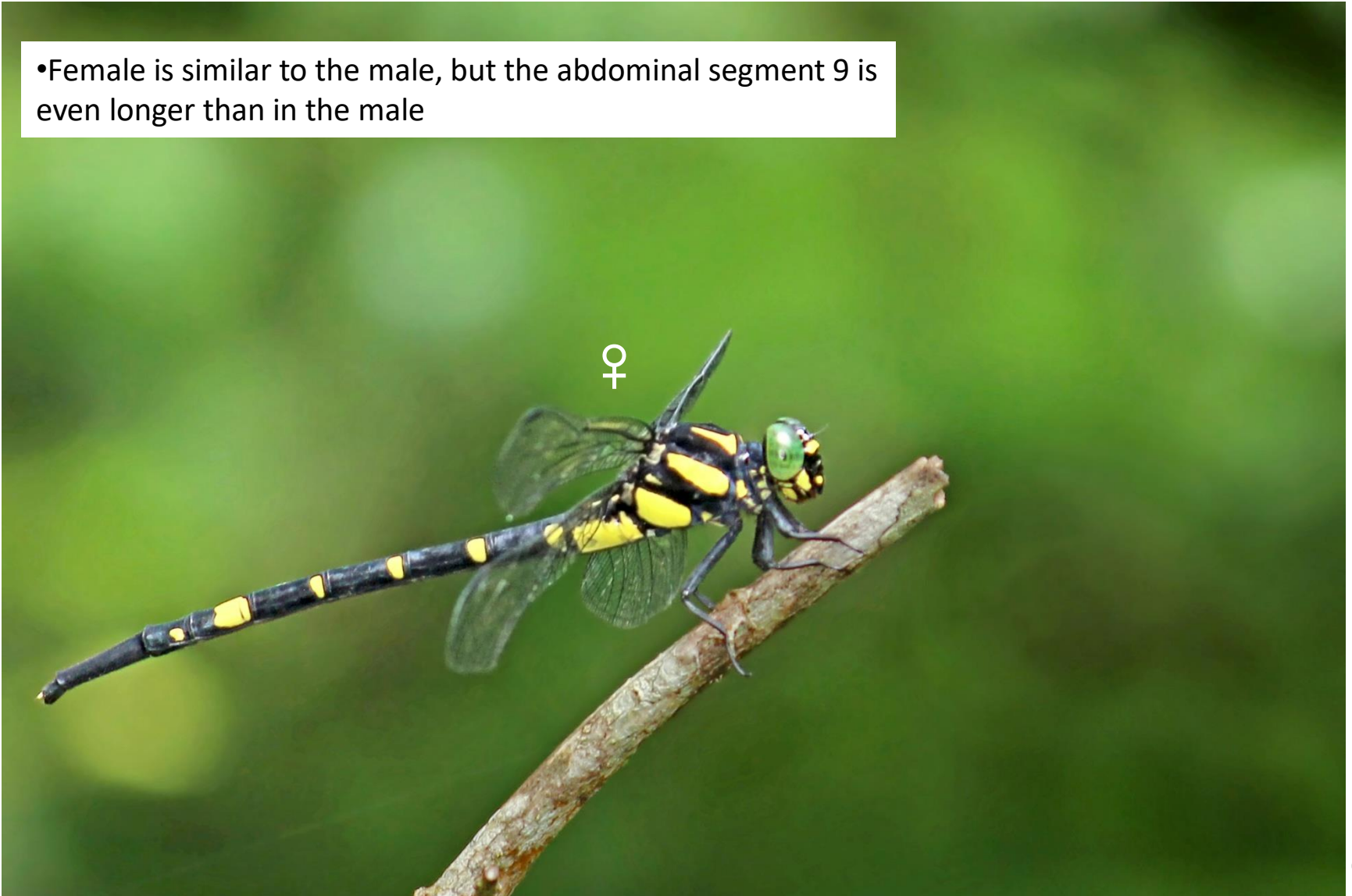


- A medium-sized dragonfly with bottle-green eyes
- Thorax is black, marked with yellow
- Abdomen is black, marked with paired yellow dorsal spots up to segment 6
- Segment 7 has the basal half yellow
- Segment 8 is very broad, marked with yellow baso-lateral spots
- Segment 9 is rather long as peculiar in *Macrogomphus* genus

# *Macrogomphus wynaadicus* Fraser, 1924

വയനാടൻ കടുവ

- Female is similar to the male, but the abdominal segment 9 is even longer than in the male





# *Megalogomphus hannyngtoni* (Fraser, 1923)

പെരുവാലൻ കടുവ

♂



- Large dragonfly with bottle-green eyes
- Thorax is black, marked with greenish-yellow
- Abdomen is black, marked with bright citron-yellow dorsal spots up to segment 6
- Segment 7 has more than the basal half yellow
- Segments 8 and 9 have small lateral basal triangular spots
- Segment 10 is entirely black

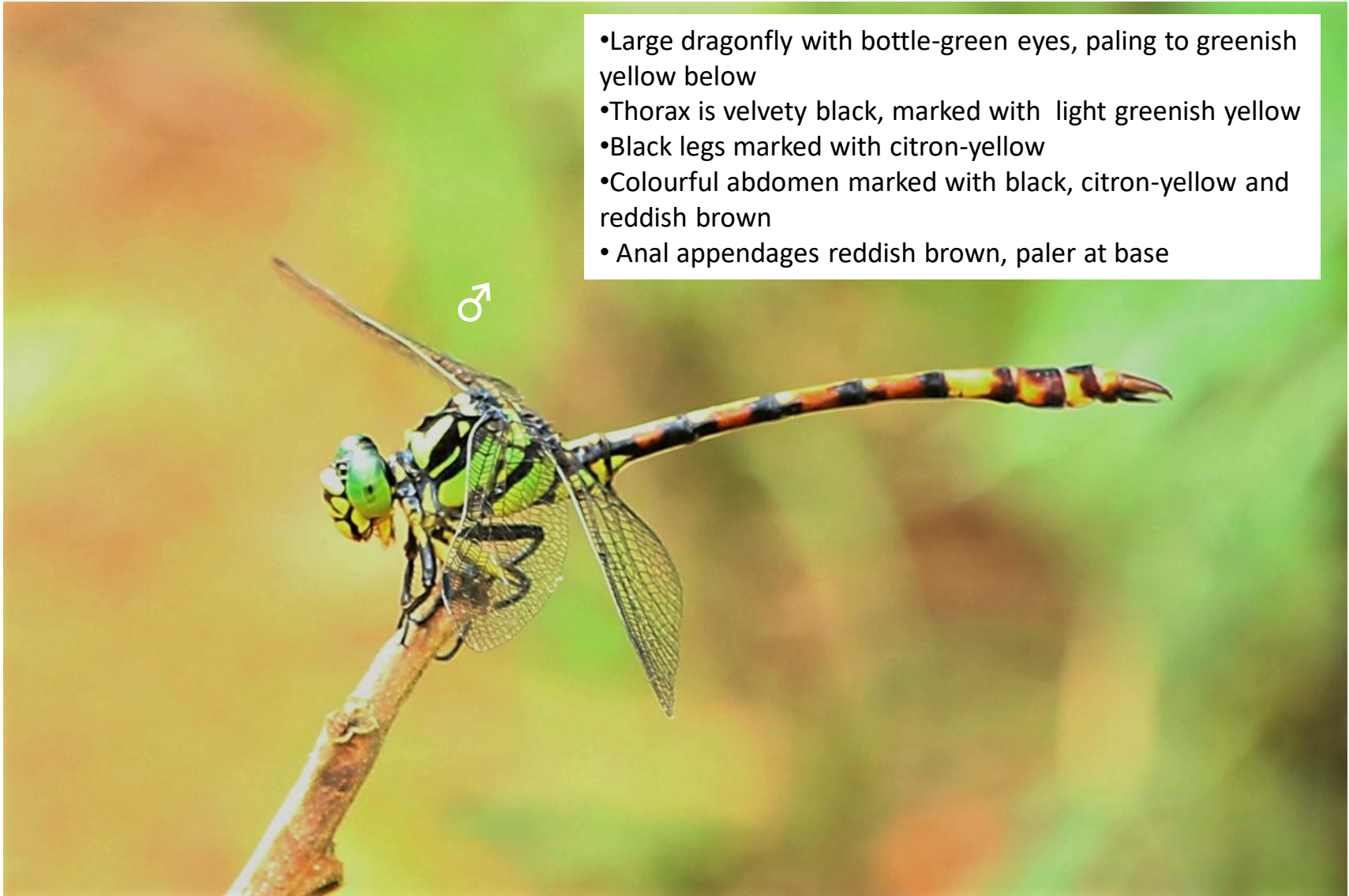


# *Megalogomphus superbus* Fraser, 1931

ചോര പെരുവാലൻ കടുവ

- Large dragonfly with bottle-green eyes, paling to greenish yellow below
- Thorax is velvety black, marked with light greenish yellow
- Black legs marked with citron-yellow
- Colourful abdomen marked with black, citron-yellow and reddish brown
- Anal appendages reddish brown, paler at base

♂



# *Melligomphus acinaces* (Laidlaw, 1922)

കുറു നഖവാലൻ

•Earlier known as *Onychogomphus acinaces*



- Medium sized dragonfly with bottle-green eyes
- Thorax and abdomen are black, marked with greenish yellow
- Segment 3 has a large basal spot; segments 4 to 6 have smaller spots
- Segment 7 has its basal half yellow
- Segment 8 has only a basal spot on the sides
- Segments 9 and 10 are unmarked
- The inferior appendage is slightly longer than superiors

© Reji Chandran & Rison Thumboor

# *Melligomphus acinaces* (Laidlaw, 1922)

കുറു നഖവാലൻ



•Female is similar to the male; but more robust

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# *Merogomphus longistigma* (Fraser, 1922)

പുളളിവാലൻ ചോലക്കടുവ



© Hemant Ogale

# *Merogomphus longistigma* (Fraser, 1922)

പുള്ളിവാലൻ ചോലക്കടുവ



•Female is similar to the male, differing mostly in sexual characters



# *Merogomphus tamaracherriensis* Fraser, 1931

മലബാർ പുളളിവാലൻ ചോലക്കടുവ



- Medium sized dragonfly with bottle-green eyes and occiput entirely black
- Thorax and abdomen are black, marked with bright yellow
- The mid-dorsal spot on segment 3 is isolated, and absent on segments 4 to 6
- Segment 7 has a ring on its basal third
- There is a mid-dorsal tiny diamond-shaped spot on the base of Segment 8
- Segments 9 and 10 usually unmarked



# *Merogomphus tamaracherriensis* Fraser, 1931

മലബാർ പുളളിവാലൻ ചോലക്കടുവ

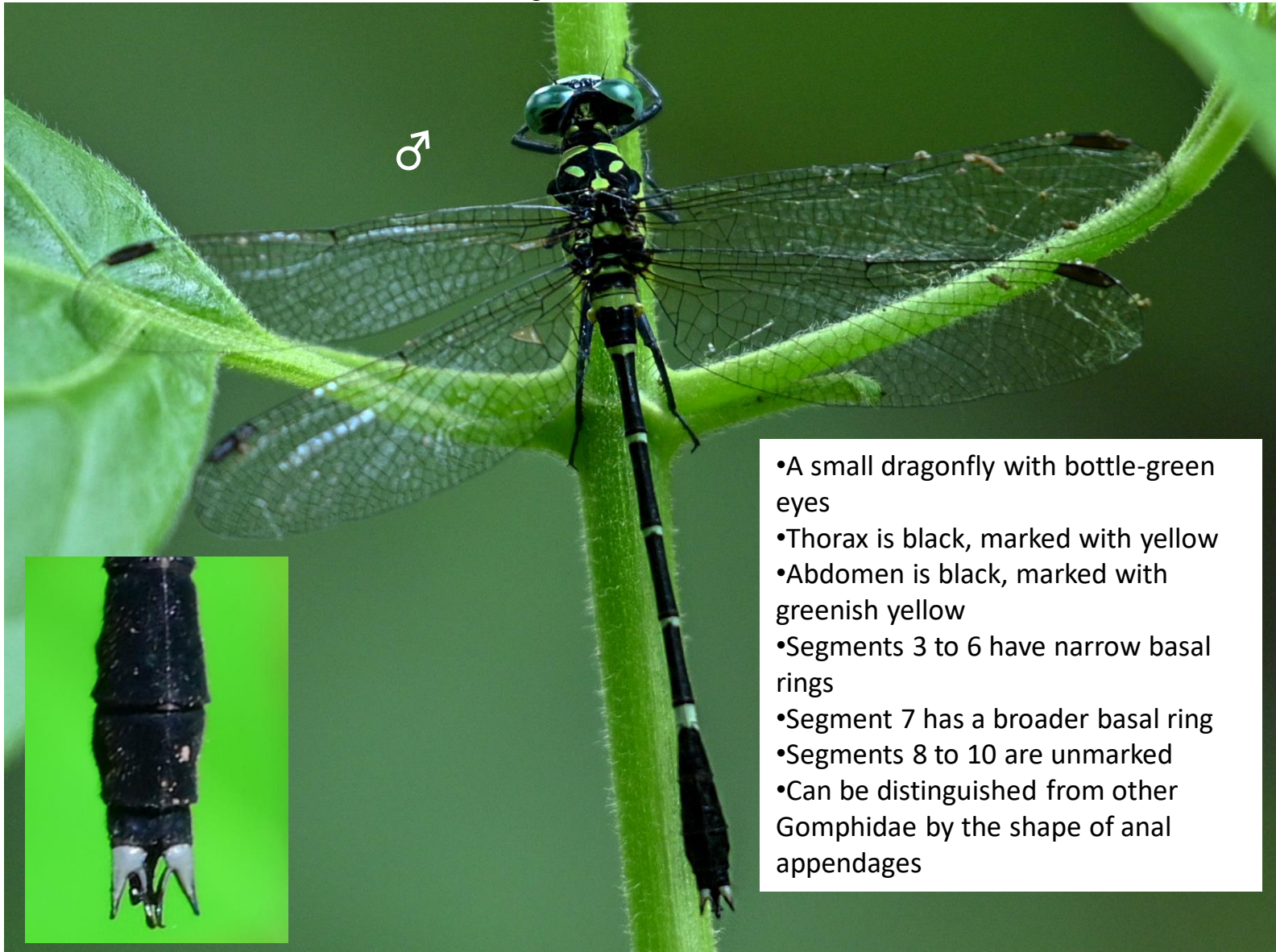
•Female is similar to the male, differing mostly in sexual characters



© Rison Thumboor

# *Microgomphus souteri* Fraser, 1924

കടുവാച്ചിന്നൻ



- A small dragonfly with bottle-green eyes
- Thorax is black, marked with yellow
- Abdomen is black, marked with greenish yellow
- Segments 3 to 6 have narrow basal rings
- Segment 7 has a broader basal ring
- Segments 8 to 10 are unmarked
- Can be distinguished from other Gomphidae by the shape of anal appendages



# *Microgomphus souteri* Fraser, 1924

കടുവാച്ചിന്നൻ

- Female is similar to the male, but abdominal segments 4 to 6 have yellow lateral oval spots in the middle of each segment





# *Nychogomphus striatus* (Fraser, 1924)

## വരയൻ നഖവാലൻ

•Earlier known as *Onychogomphus striatus*

- Medium-sized dragonfly with bottle-green eyes
- Thorax and abdomen are black, marked with greenish yellow
- Segment 1 of the abdomen is black, with a large lateral yellow spot
- Segment 2 has a narrow basal black ring and broad sub-basal black stripes
- Segments 3 to 6 have yellow basal rings and median dorsal spots
- Segment 7 has its basal half yellow
- Segments 8 and 9 are black, with large yellow spots on each side; segment 10 is entirely black
- Superior anal appendages are yellow, the inferior is dark



# *Nychogomphus striatus* (Fraser, 1924)

വരയൻ നഖവാലൻ



•Female is similar to the male, but more robust



# *Paragomphus lineatus* (Selys, 1850)

ചുണ്ടവാലൻ കടുവ

- Medium sized dragonfly with bluish grey eyes
- Thorax is yellow, marked with blackish brown
- Abdomen is black marked with yellow basal rings
- Segments 8 and 9 have wide dilatations at their sides, are black on the dorsum except for fine basal rings
- Segment 10 is yellow, with black on the basal half of the dorsum
- Anal appendages are yellow and hook-shaped

♂



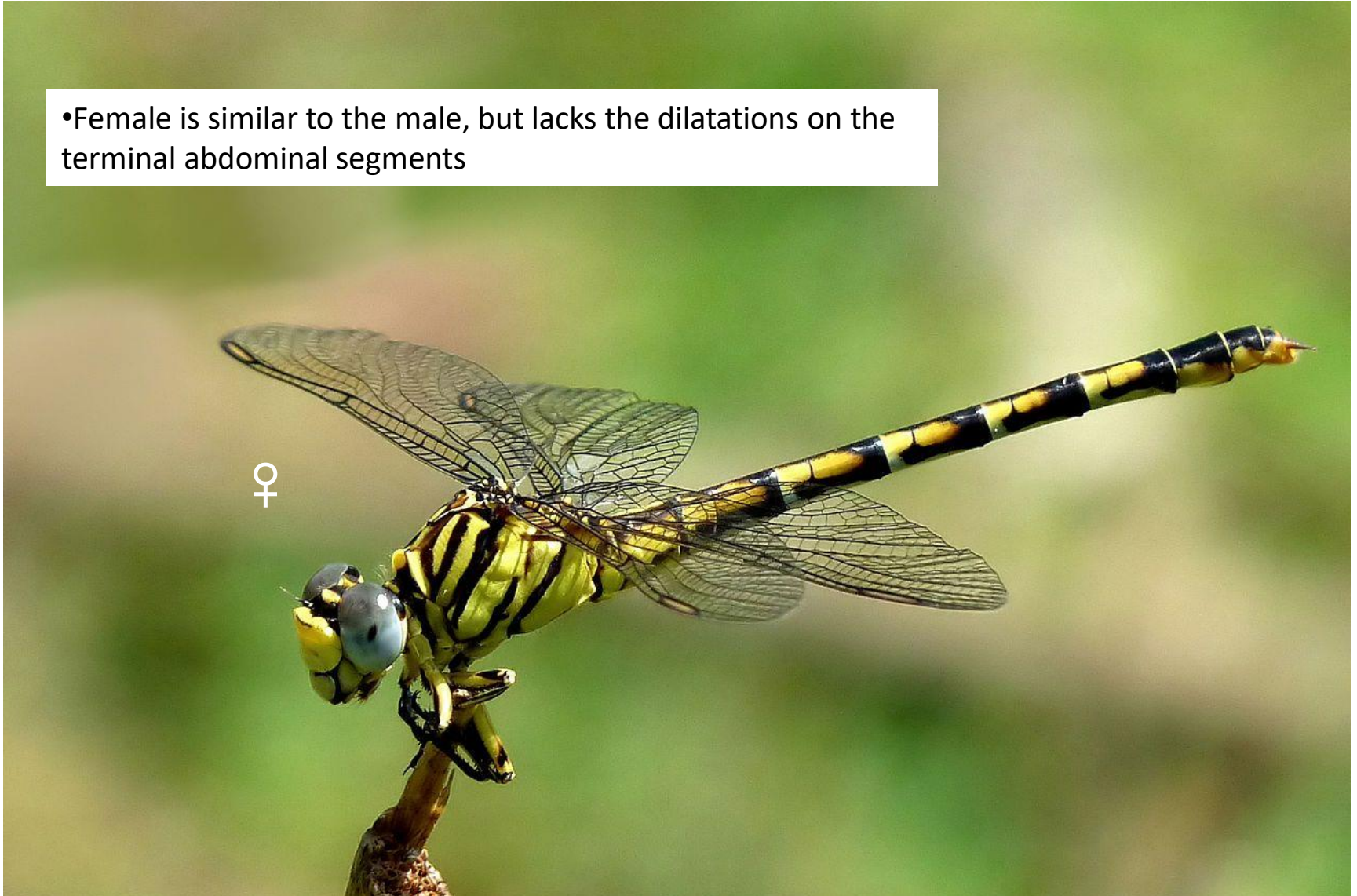


# *Paragomphus lineatus* (Selys, 1850)

ചുണ്ടവാലൻ കടുവ

•Female is similar to the male, but lacks the dilatations on the terminal abdominal segments

♀



# Chlorogomphidae (Mountain Hawks)

(മലമുത്തന്മാർ)

- Large black dragonflies with bright yellow markings
- Have large and moderately separated eyes
- Wings are transparent or tinted with golden yellow
- Tibiae of legs of male with a long membranous keel
- Found in forests, flying high above the tree canopy
- Breed in torrential streams
- Only two species are found in the Western Ghats, *Chlorogomphus campioni* and *Chlorogomphus xanthoptera*



*Chlorogomphus campioni*

© Subramanian K. A.

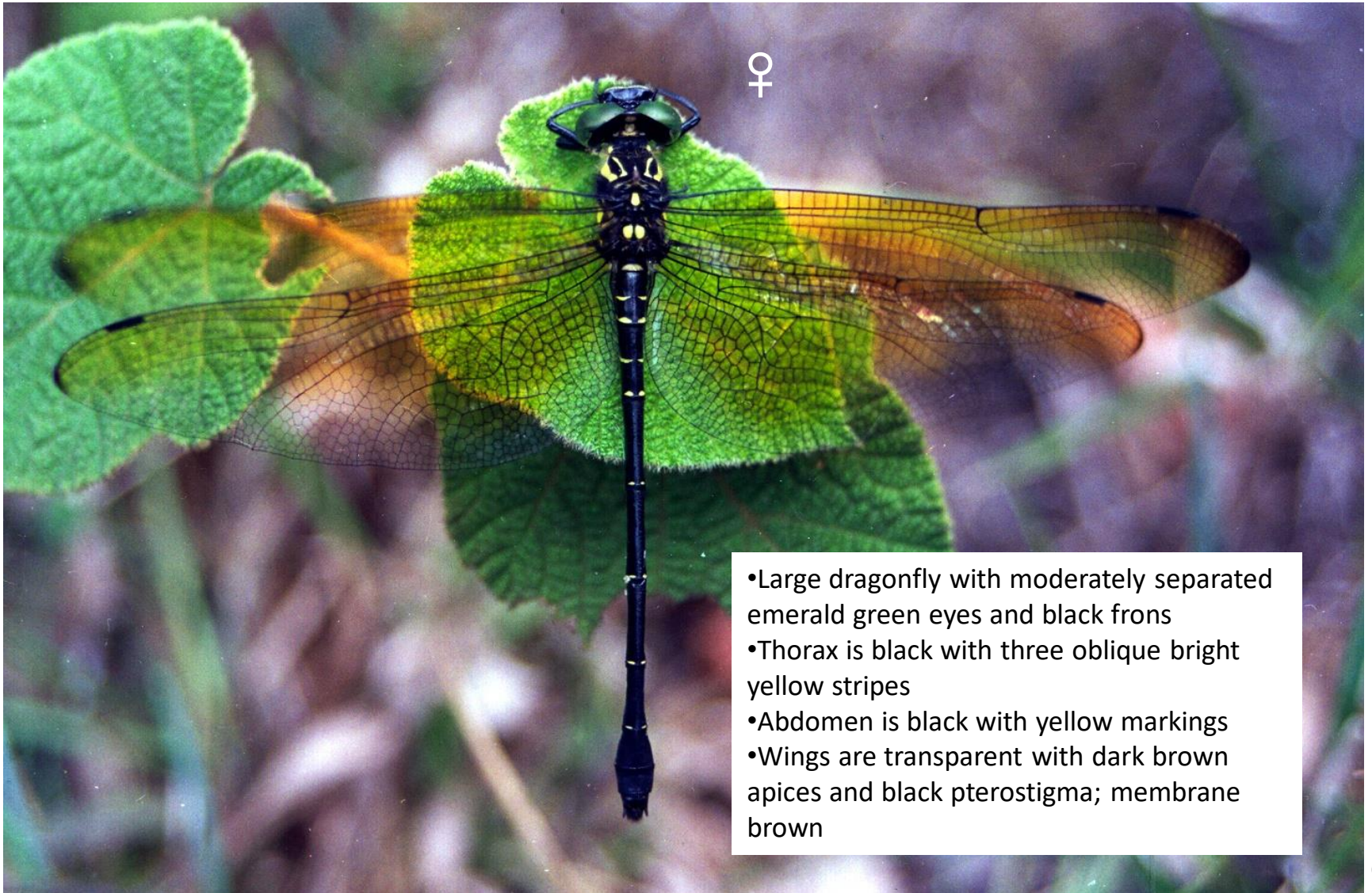
# *Chlorogomphus* species of the Western Ghats

Feature	<i>Chlorogomphus xanthoptera</i>	<i>Chlorogomphus campioni</i>
Head	Labium pale brownish-yellow; labrum blackish-brown; anteclypeus pale brownish-yellow, yellow along superior border; postclypeus greenish-yellow, narrowly bordered below with dark brown; frons dark brown, traversed along crest by a broad greenish-yellow stripe; eyes bottle-green during life; occiput and vesicle black, the former fringed with coarse dark brown hairs.	Labium pale yellow; labrum black; ante- and postclypeus black, the latter traversed by a citron-yellow stripe which broadens at either end; frons black, its crest, in front and above, and a spot on either side citron-yellow, frons as high as occiput, which is black and fringed with coarse hairs; eyes moderately separated, brilliant emerald-green; margins of face and frons fringed with coarse black hairs.
Abdominal markings	Greenish-yellow markings: S1 to S3 has a continuous stripe on the lower part of sides. Dorsum of S2 coated with dense coarse black hairs.	Yellow markings: S1 with a small dorsal spot & the sides broadly. S2 with a complete apical ring. Apical ring on S3 almost divided by mid-dorsal carina.
Anal appendages	Superiors slightly shorter than S10.	Superiors as long as S10.
Distribution	Western Ghats south of the Palghat Gap	Western Ghats north of the Palghat Gap



# *Chlorogomphus campioni* (Fraser, 1924)

നീലഗിരി മലമുത്തൻ



- Large dragonfly with moderately separated emerald green eyes and black frons
- Thorax is black with three oblique bright yellow stripes
- Abdomen is black with yellow markings
- Wings are transparent with dark brown apices and black pterostigma; membrane brown



# *Chlorogomphus xanthoptera* (Fraser, 1919)

ആനമല മലമുത്തൻ



- Large dragonfly with moderately separated bottle-green eyes and dark brown frons
- Thorax is black, marked with bright grass-green
- Abdomen is black marked with greenish yellow
- Wings transparent, palely suffused and all apices narrowly bordered with burnt brown

# Macromiidae (Cruisers)

(നീർക്കാവലന്മാർ)

- Fly continuously in active hours
- Perch vertically with wings wide open while roosting
- Eyes are green and just barely meet at the top of the head
- Wings long and pointed at the apices; base of hindwings strongly angulated and emarginated in the male; always rounded in the female
- Mostly breed in rivers, streams and lakes
- Lay their eggs by dipping the abdomen in the water as they fly over
- *Epophthalmia* and *Macromia* are the two genera in this family found in the Western Ghats



© Suraj Naik

*Epophthalmia vittata*



© Jeevan Jose

*Macromia ellisoni*



# *Epophthalmia frontalis* Selys, 1871

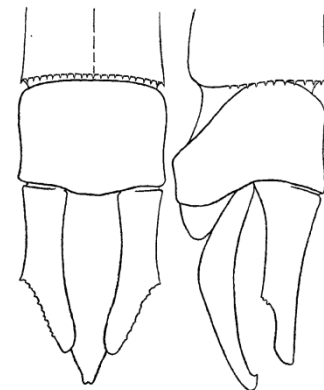
## പുള്ളി നീർക്കാവലൻ

- Large dragonfly with bluish green eyes and dark metallic blue frons
- Thorax is dark reddish brown, marked with yellow
- Abdomen is black, changing to dark reddish-brown at the terminal segments, ringed with bright ochreous yellow
- Base of segment 1 is yellow



- The basal yellow rings get narrower from segment 4 to segment 7
- Segment 8 has a broad basal triangle of yellow
- S10 is almost entirely yellow

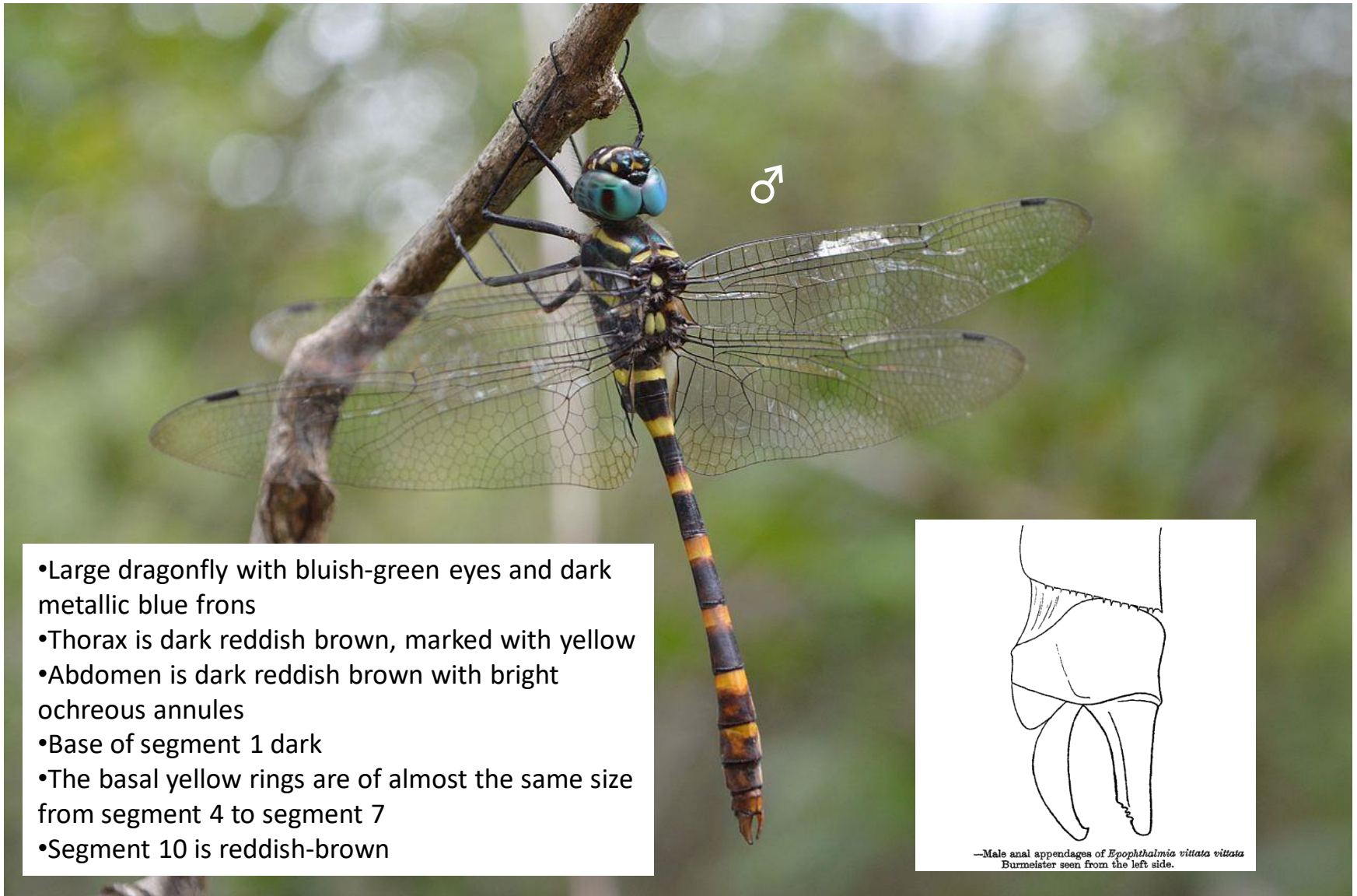
© Reji Chandran



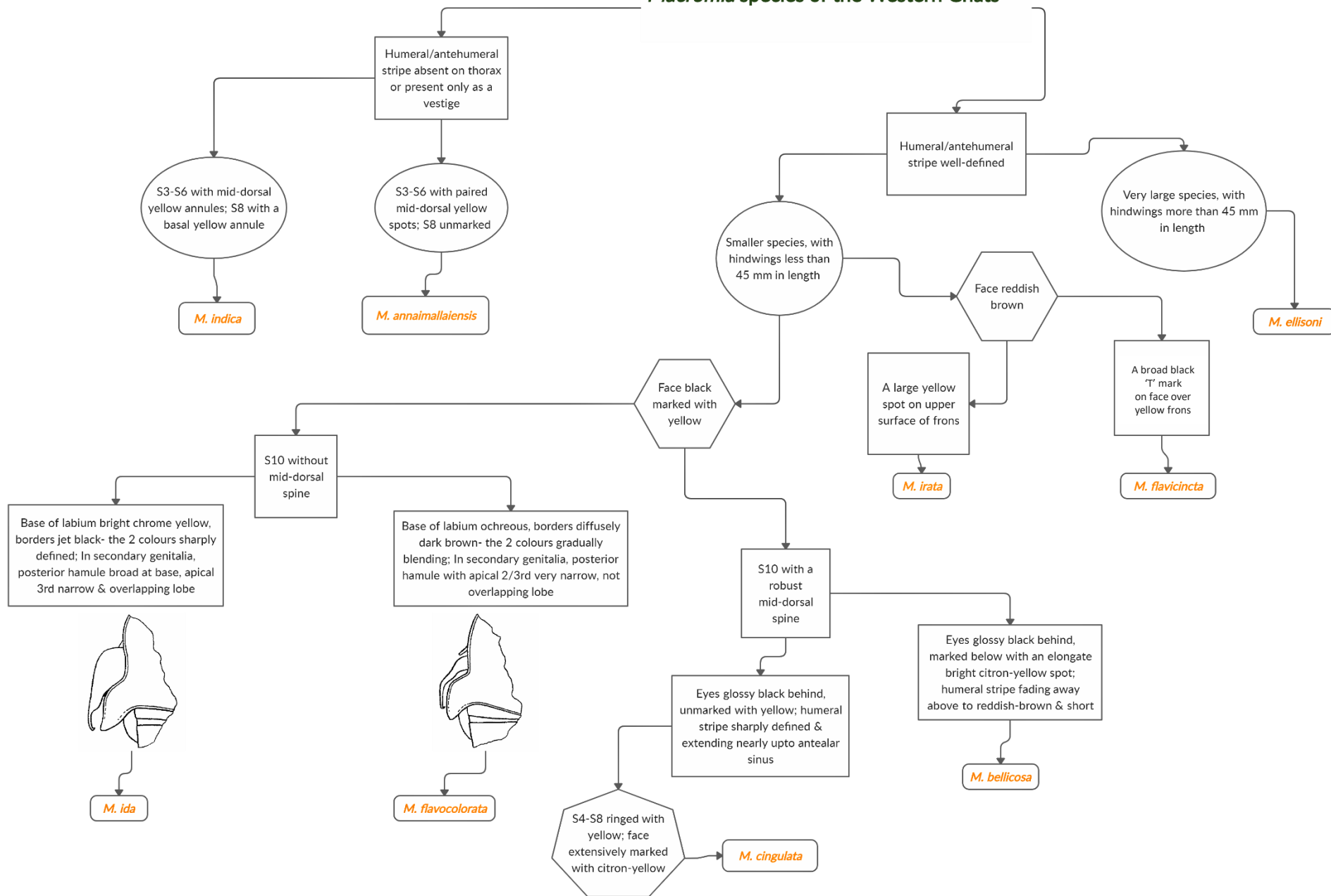
—Anal appendages of *Epophthalmia frontalis binocellata* Fraser, male, dorsal and left lateral views.

# *Epophthalmia vittata* Burmeister, 1839

നാട്ടു നീർക്കാവലൻ



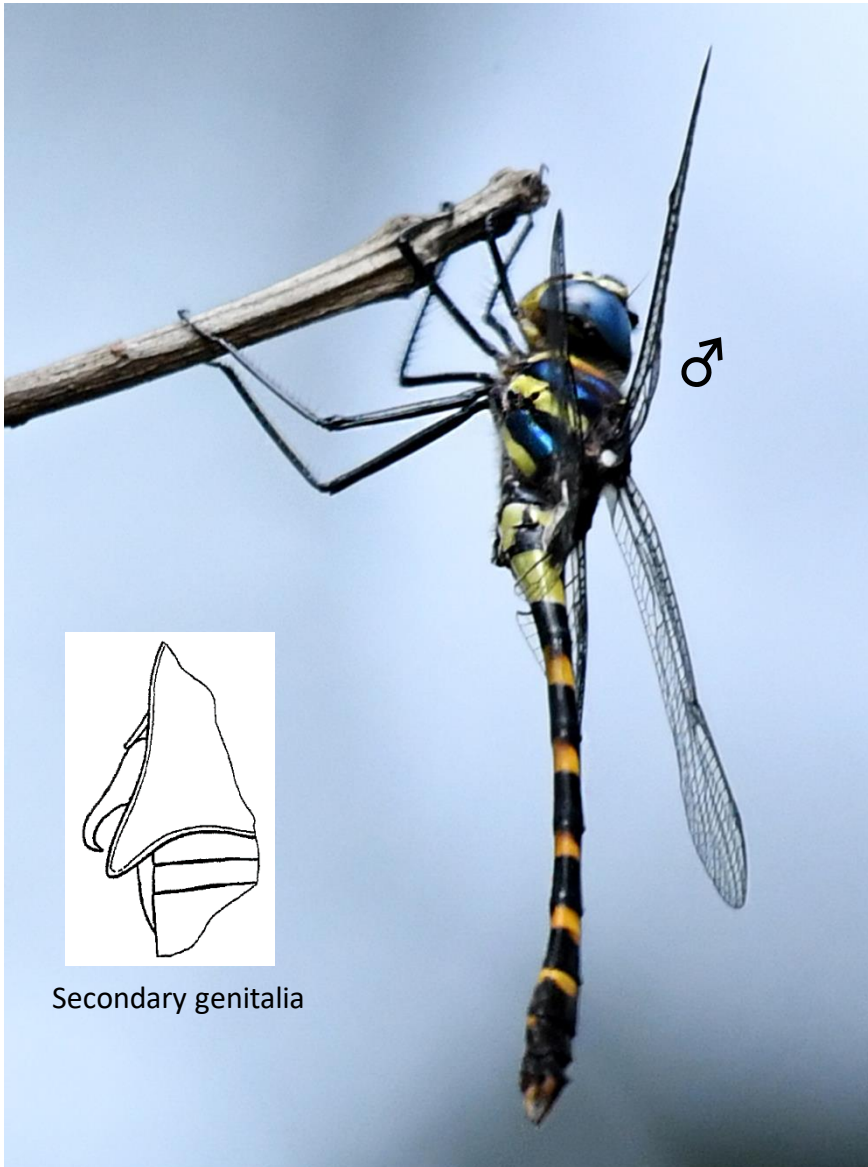
## Macromia species of the Western Ghats





# *Macromia bellicosa* Fraser, 1924

വഴക്കാളിപ്പെരുങ്കണ്ണൻ

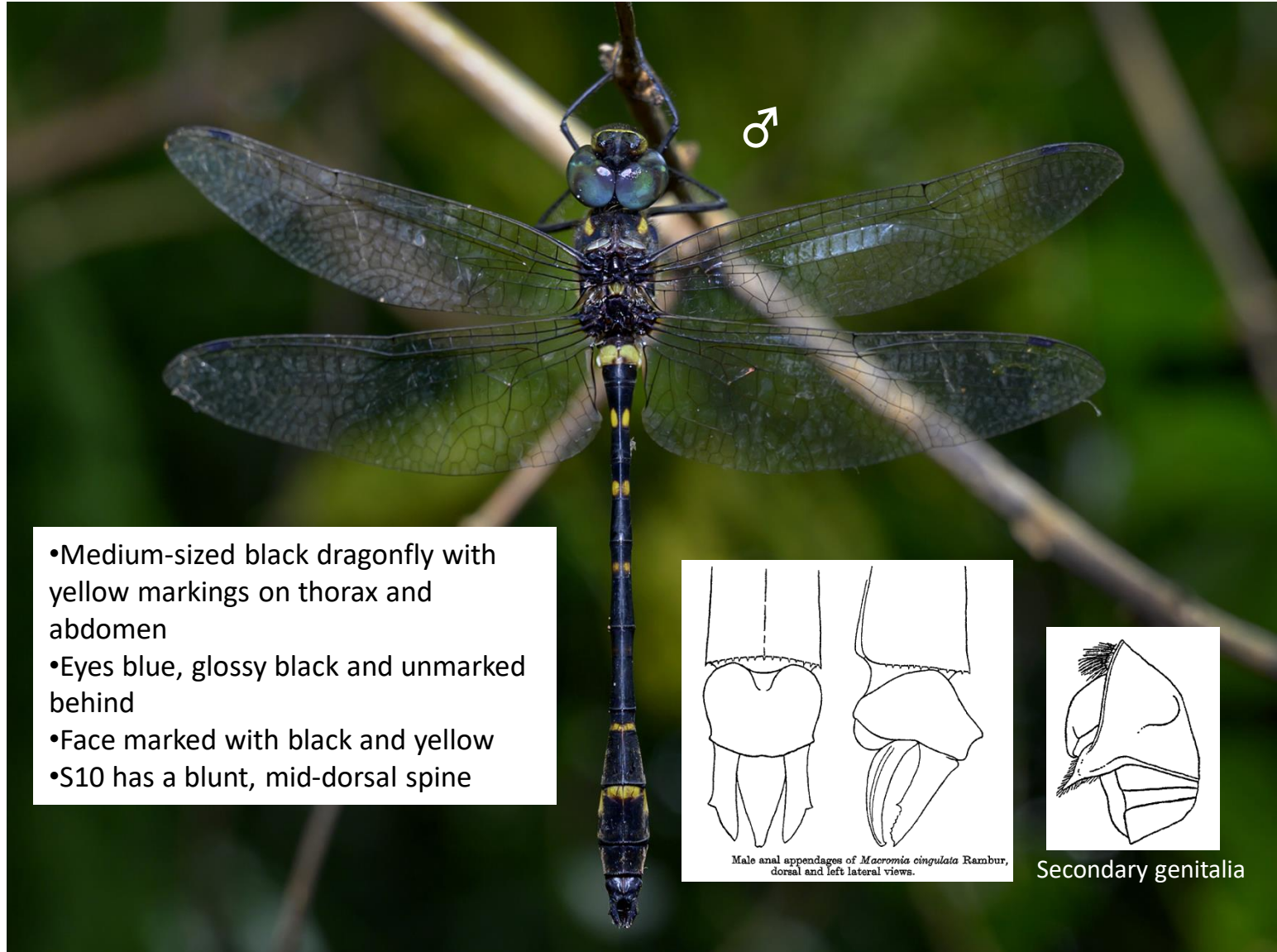


Secondary genitalia

- Medium sized black dragonfly with yellow markings on thorax and abdomen
- Eyes bluish green, behind eyes glossy black with an elongate bright citron-yellow spot below
- Face marked with black and yellow
- S9 with a well marked dorsal carina pointed apically and S10 with a robust, mid-dorsal spine

# *Macromia cingulata* Rambur, 1842

ആറ്റു പെരുങ്കണ്ണൻ



© Reji Chandran

# *Macromia cingulata* Rambur, 1842

ആറ്റു പെരുങ്കണ്ണൻ



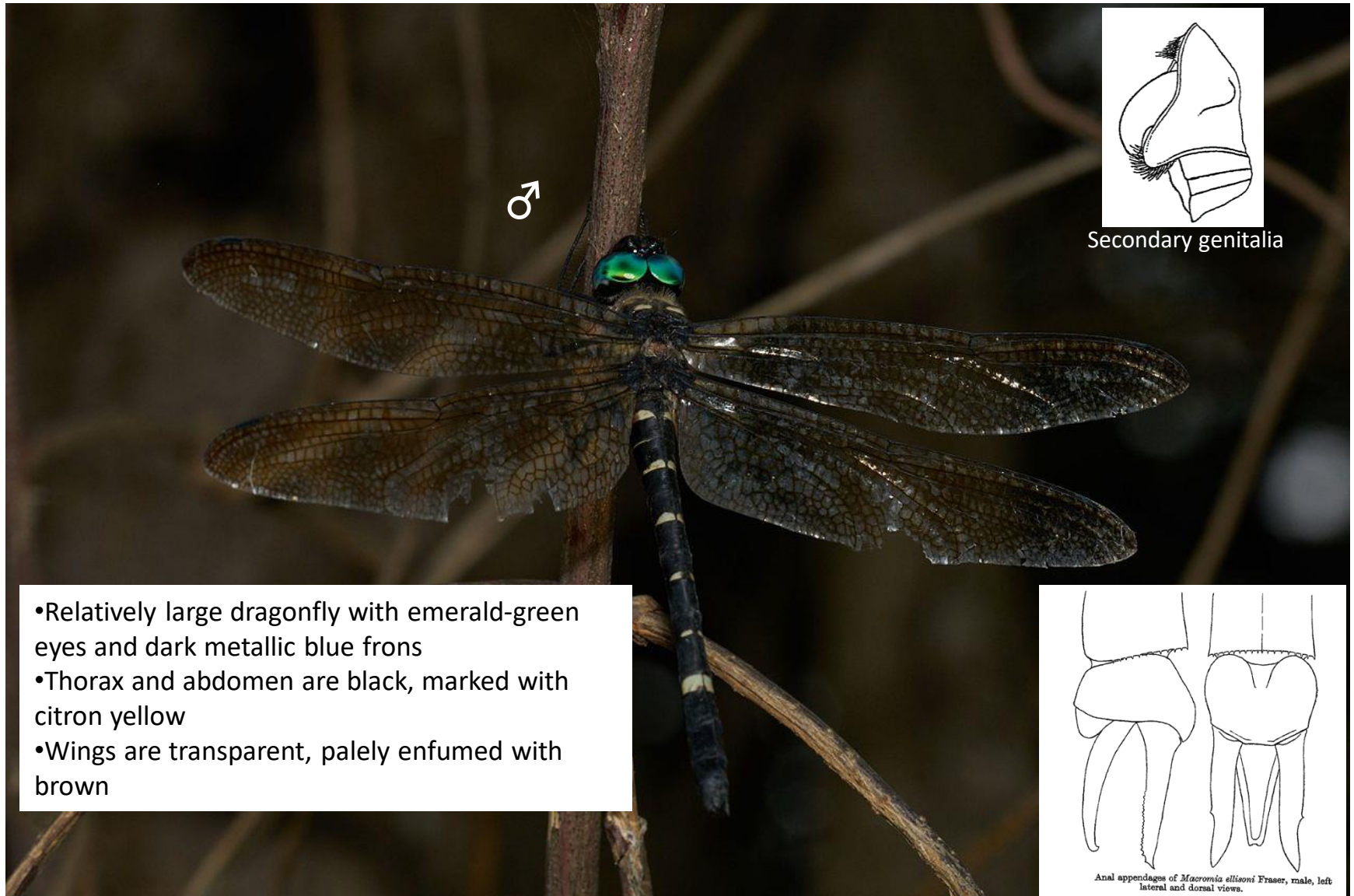
•Female is similar to the male,  
but more robustly built

© [Reji Chandran](#)



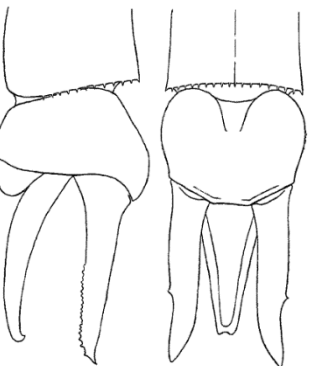
# *Macromia ellisoni* Fraser, 1924

നാട്ടു പെരുങ്കണ്ണൻ



- Relatively large dragonfly with emerald-green eyes and dark metallic blue frons
- Thorax and abdomen are black, marked with citron yellow
- Wings are transparent, palely enfumed with brown

Secondary genitalia



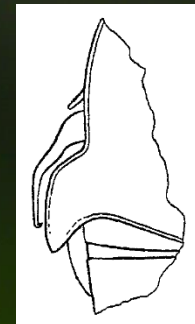
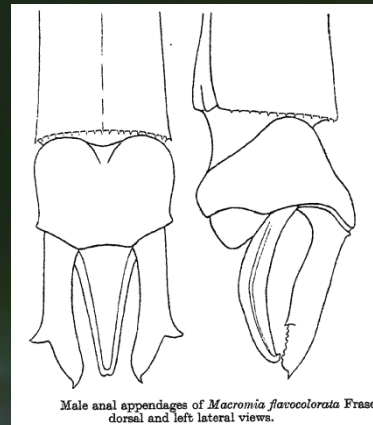
Anal appendages of *Macromia ellisoni* Fraser, male, left lateral and dorsal views.

# *Macromia flavocolorata* Fraser, 1922

മഞ്ഞപ്പെരുങ്കണ്ണൻ

♂

- Medium-sized black dragonfly with citron yellow markings on thorax and abdomen
- Eyes emerald green in adults, reddish brown in teneral
- Face marked with brown and yellow



Secondary genitalia



# *Macromia flavocolorata* Fraser, 1922

മഞ്ഞപ്പൊരുക്കണ്ണൻ



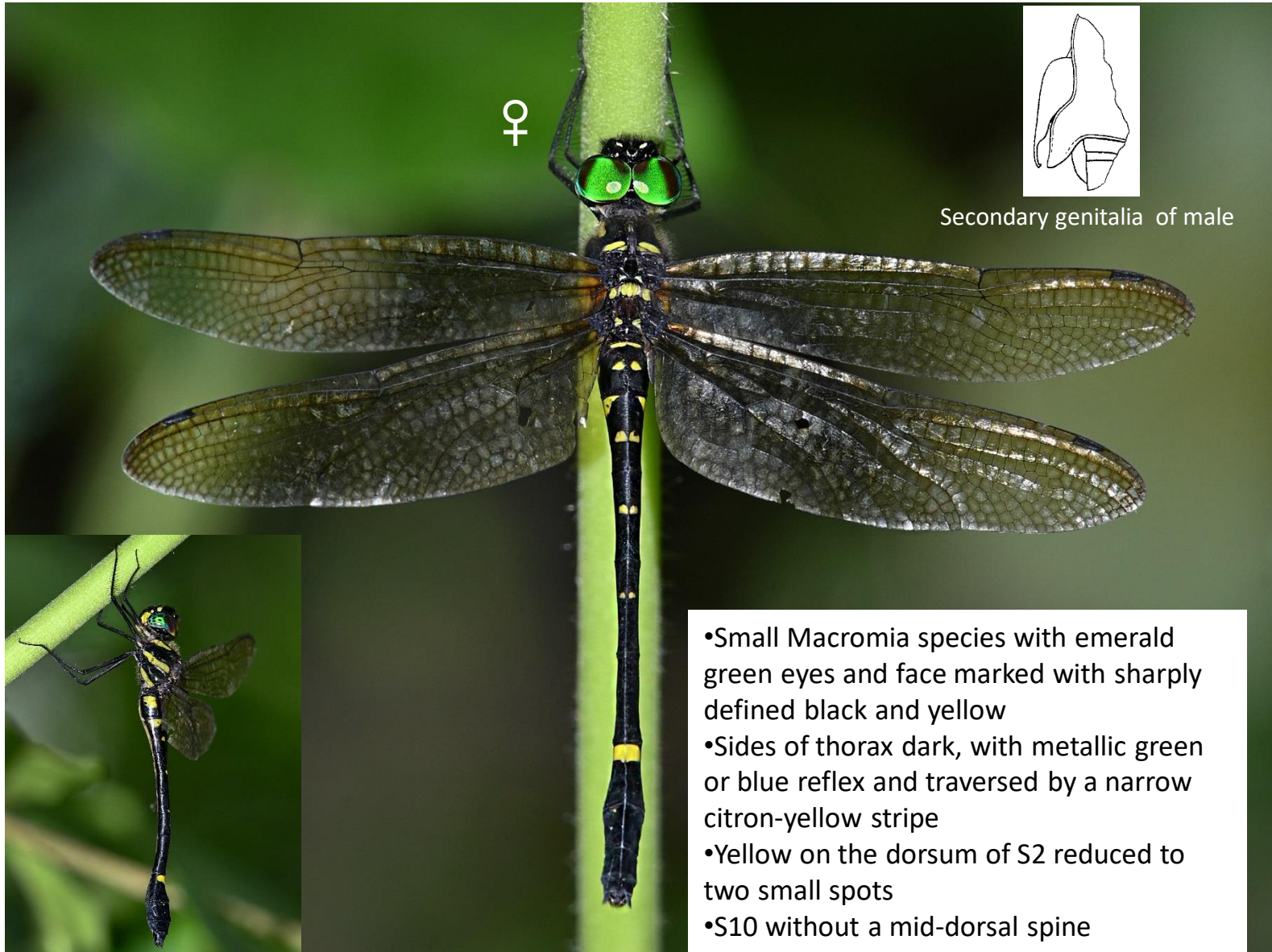
A teneral female

- Female similar to male, differing mostly in sexual characters



# *Macromia ida* Fraser, 1924

മാമലപ്പെരുക്കണ്ണൻ



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# *Macromia irata* Fraser, 1924

ചുടൻ പെരുങ്കണ്ണൻ



- Medium-sized black dragonfly with emerald-green eyes and ferruginous face with chrome-yellow markings
- Thorax and abdomen are metallic-black, marked with citron yellow
- Segment 2 has a pair of mid-dorsal diamond-shaped spots narrowly separated in the middle
- Segments 3 to 6 have the paired mid-dorsal spots
- Segment 7 has the basal third to half yellow
- Segment 8 has a narrow basal annule



# Corduliidae (Emeralds)

(മരതകക്കണ്ണന്മാർ)

- Have large, emerald-green eyes
- Black or dark brown body with areas of metallic green or yellow
- Breed in montane lakes or in deep still pools of mountain streams
- *Hemicordulia asiatica* is the only species in this family found in the Western Ghats



© Chares C K

*Hemicordulia asiatica*



# *Hemicordulia asiatica* Selys, 1878

കാട്ടു മരതകൻ

- Medium sized dragonfly with emerald-green eyes and frons
- Thorax is dark metallic green, marked with yellow on the sides
- Abdomen is glossy black, marked laterally in bright ochreous colour
- Wings are transparent



# *Hemicordulia asiatica* Selys, 1878

കാട്ടു മരതകൻ

- Female similar to the male but having restricted metallic green on head and thorax; clear amber patch at the wing bases



# Libellulidae (Skimmers)

(നീർമുത്തന്മാർ)

- Largest dragonfly family in the world
- Large, medium or small sized dragonflies; perch flat or with raised abdomen
- Some of them make continuous flights
- Eyes are confluent
- Most of them are brightly coloured; thorax rarely has any metallic colour
- Wings may be transparent, opaque, or with patches at the base; hindwing bases in both sexes always rounded
- Breed in a wide variety of aquatic habitats, including still and running waters where eggs are deposited directly in water



© Jeevan Jose



# *Acisoma panorpoides* Rambur, 1842

മകുടിവാലൻ



- Small dragonfly with blue eyes, azure-blue thorax and abdomen, marbled with black
- The characteristic shape of the abdomen will help to distinguish this species from other members of Libellulidae

# *Acisoma panorpoides* Rambur, 1842

മകുടിവാലൻ



- Female is similar to the male in markings and shapes but differs in colours
- Eyes, thorax and abdominal segments up to 5 are greenish-yellow



# *Aethriamanta brevipennis* (Rambur, 1842)

ചോപ്പൻ കുറുവാലൻ



- Small dragonfly with dark reddish brown eyes, blackish brown thorax and bright red abdomen
- Breeds in weedy ponds and lakes



# *Aethriamanta brevipennis* (Rambur, 1842)

ചോപ്പൻ കുറുവാലൻ

•Female is similar to the male, but golden greenish yellow in colour, marked with black

♀



# ***Brachydiplax chalybea* Brauer, 1868**

തവിട്ടുവെണ്ണീറൻ

- Small dragonfly with dark-brown eyes and yellowish brown thorax, powdered with blue pruinescence
- Abdomen is also powdered with blue, except on the last segments
- Wings are transparent, with brown tinted base

♂





# ***Brachydiplax chalybea* Brauer, 1868**

തവിട്ടുവെണ്ണീറൻ



- Female is brownish yellow in colour with darker markings
- Wings are transparent, with pale narrow yellow tint at base



# *Brachydiplax sobrina* (Rambur, 1842)

ചെറുവെണ്ണീറൻ



- Small dragonfly with dark brown eyes and yellowish brown thorax, powdered with blue pruinescence
- Abdomen is also powdered with blue, except on the last segments
- Wings are transparent, without any tint



# *Brachydiplax sobrina* (Rambur, 1842)

ചെറുവെണ്ണീറൻ

- Female is bright yellow in colour, broadly marked with black
- Can be separated from female *B. chalybea* by the broad black stripes on the thorax





# *Brachythemis contaminata* (Fabricius, 1793)

## ചങ്ങാതിത്തുമ്പി

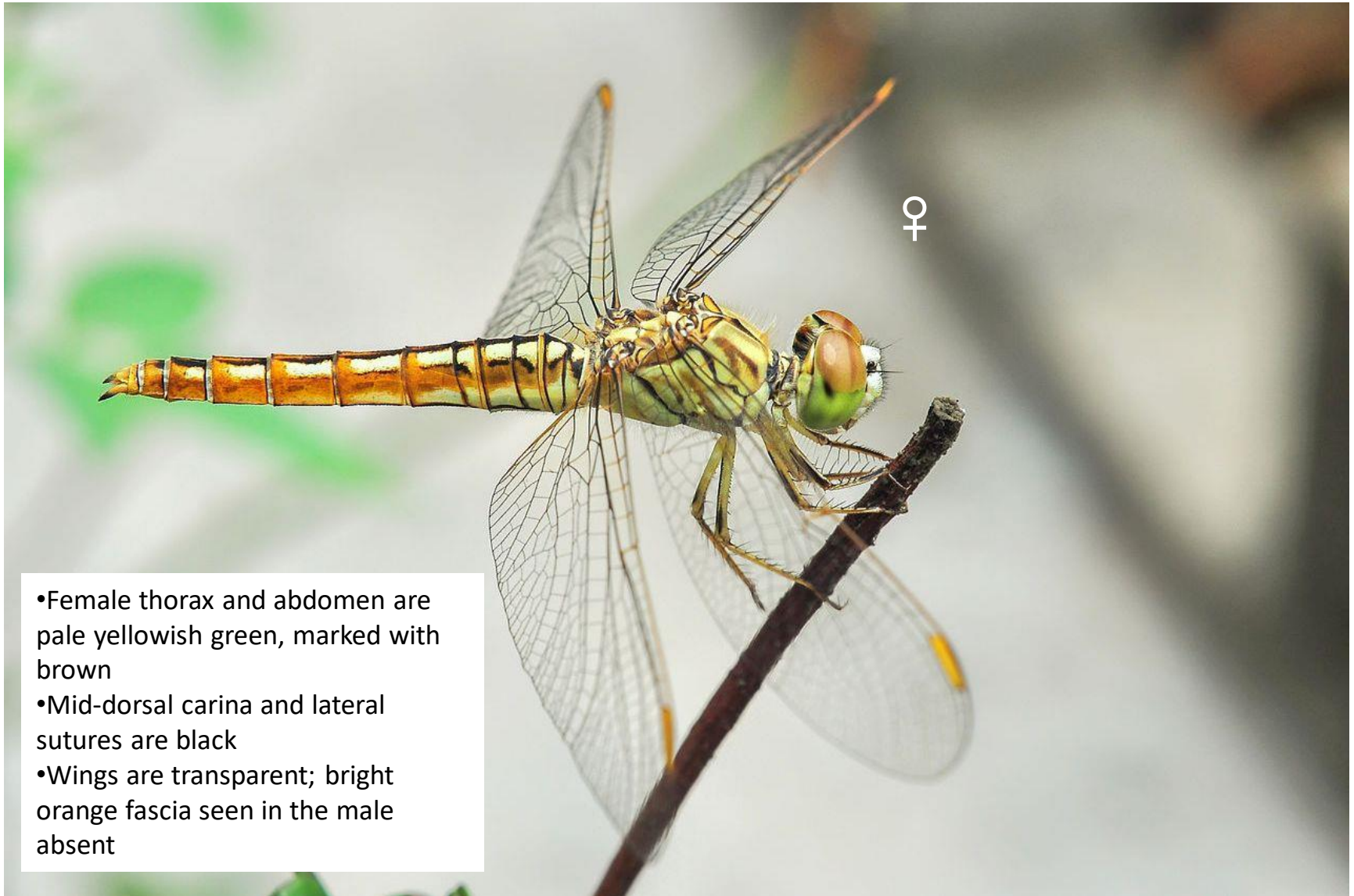
- Small dragonfly with brown-capped yellowish green eyes and olivaceous brown thorax
- Abdomen is ochreous red, marked with brown stripes
- Wings are transparent, but with a broad orange fascia between the base and the reddish pterostigma





# *Brachythemis contaminata* (Fabricius, 1793)

ചങ്ങാതിത്തുമ്പി



- Female thorax and abdomen are pale yellowish green, marked with brown
- Mid-dorsal carina and lateral sutures are black
- Wings are transparent; bright orange fascia seen in the male absent



# ***Bradinopyga geminata* (Rambur, 1842)**

മതിൽത്തുമ്പി

- Medium sized dragonfly with brown-capped grey eyes and ashy grey thorax
- Abdomen is coloured very similarly to thorax, black marbled with yellowish white
- Wings are transparent with dual coloured pterostigma, black at centre and white at both ends

♂



# *Bradinopyga geminata* (Rambur, 1842)

മതിൽത്തുമ്പി

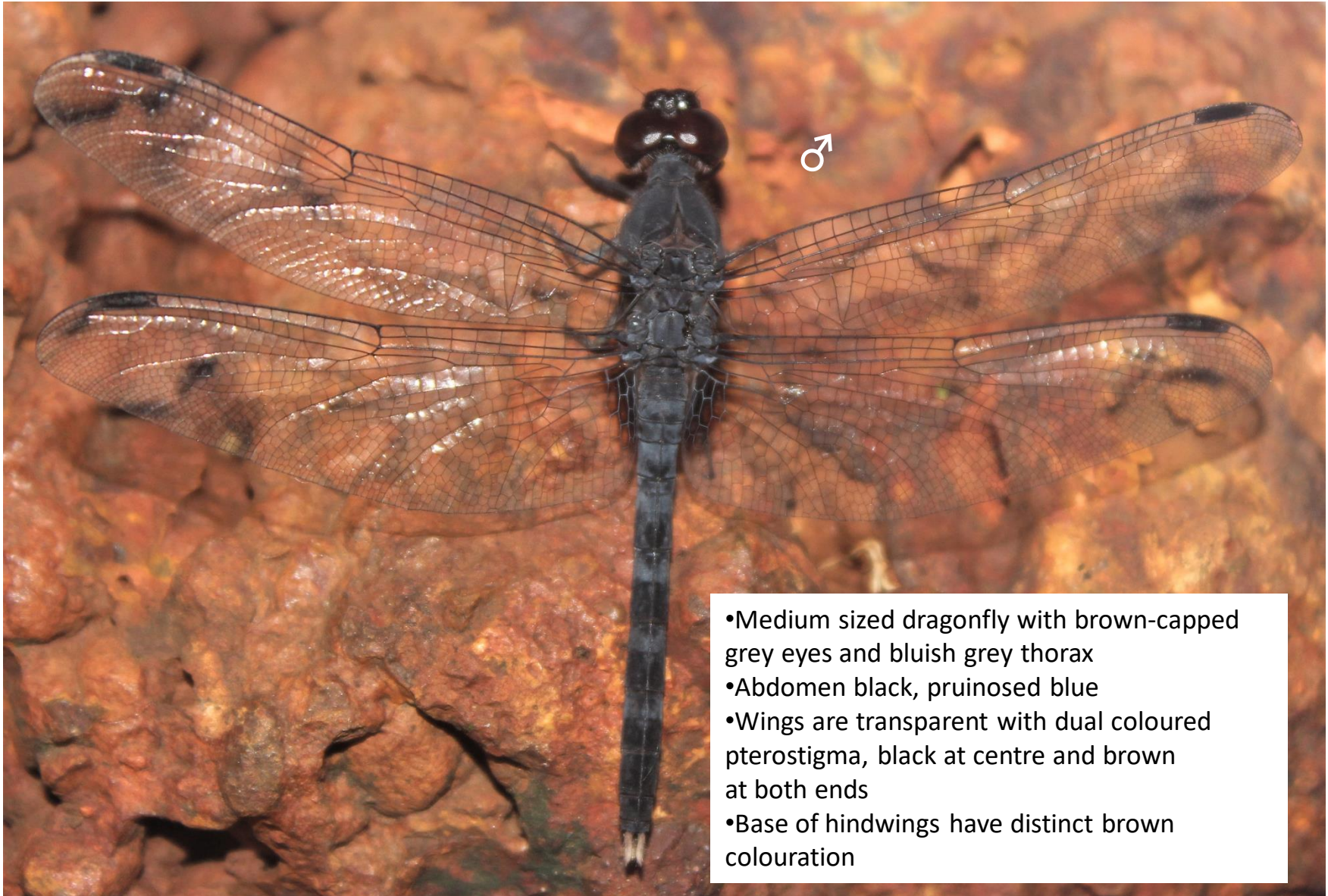


© Vengolis



# *Bradinopyga konkanensis* Joshi & Sawant, 2020

ചെങ്കൽത്തുമ്പി



- Medium sized dragonfly with brown-capped grey eyes and bluish grey thorax
- Abdomen black, pruinosed blue
- Wings are transparent with dual coloured pterostigma, black at centre and brown at both ends
- Base of hindwings have distinct brown colouration



# ***Bradinopyga konkanensis* Joshi & Sawant, 2020**

ചെങ്കൽത്തുമ്പി





# *Cratilla lineata* (Brauer, 1878)

കാട്ടുപതുങ്ങൻ



- Medium sized dragonfly with metallic blue frons and brown-capped grey eyes
- Thorax is bronze-black, marked with yellow
- Abdomen is black, marked with narrow yellow stripes
- All markings may get obscured with bluish pruinescence in older individuals



# *Cratilla lineata* (Brauer, 1878)

കാട്ടുപതുങ്ങൻ



© Jeevan Jose

# *Crocothemis servilia* (Drury, 1773)

വയൽത്തുമ്പി



- Medium sized dragonfly with blood-red eyes, frons and thorax
- Abdomen is red with a narrow black mid-dorsal carina



# *Crocothemis servilia* (Drury, 1773)

വയൽത്തുമ്പി

- Female is yellowish brown
- The black mid-dorsal carina on the abdomen is rather broad

♀



# *Diplacodes lefebvrii* (Rambur, 1842)

## കരിനിലത്തൻ

- Small dragonfly with dark eyes, thorax, and abdomen
- Face entirely black with the frons having a violaceous reflex above
- In sub-adults, some yellow marks on sides of thorax and abdomen are visible
- Pterostigma brown between thick black nervures; base of hindwings with a blackish brown marking.
- Anal appendages black or yellow, with base black in sub-adults

♂





# *Diplacodes lefebvrii* (Rambur, 1842)

കരിനിലത്തൻ



# *Diplacodes nebulosa* (Fabricius, 1793)

ചുട്ടിനിലത്തൻ

♂

- Small dragonfly with brown-capped yellowish eyes, dark thorax and abdomen, and dark wing tips
- In sub-adults, some yellow marks on sides of thorax and abdomen are visible



# *Diplacodes nebulosa* (Fabricius, 1793)

## ചുട്ടിനിലത്തൻ

- Female is yellowish brown, marked with black
- Wings are transparent; hind wings have small amber yellow patches near the base
- Pterostigma black

♀



# *Diplacodes trivialis* (Rambur, 1842)

നാട്ടുനിലത്തൻ



- Small dragonfly with bluish eyes, olivaceous thorax and abdomen, marked with black
- In old adults, the whole thorax and abdomen become uniform pruinose blue



# *Diplacodes trivialis* (Rambur, 1842)

നാട്ടുനിലത്തൻ

- Female has brown-capped yellowish green eyes, olivaceous thorax and abdomen, marked with black

♀



# *Epithemis mariae* (Laidlaw, 1915)

തീക്കറുപ്പൻ

- Small dragonfly with brown-capped yellowish eyes, dark thorax with a broad yellow humeral stripe on either side
- Segments 1-3 of the abdomen are orange-red, the remaining segments are black with basal yellow rings

♂



# *Epithemis mariae* (Laidlaw, 1915)

തീക്കുറുപ്പൻ



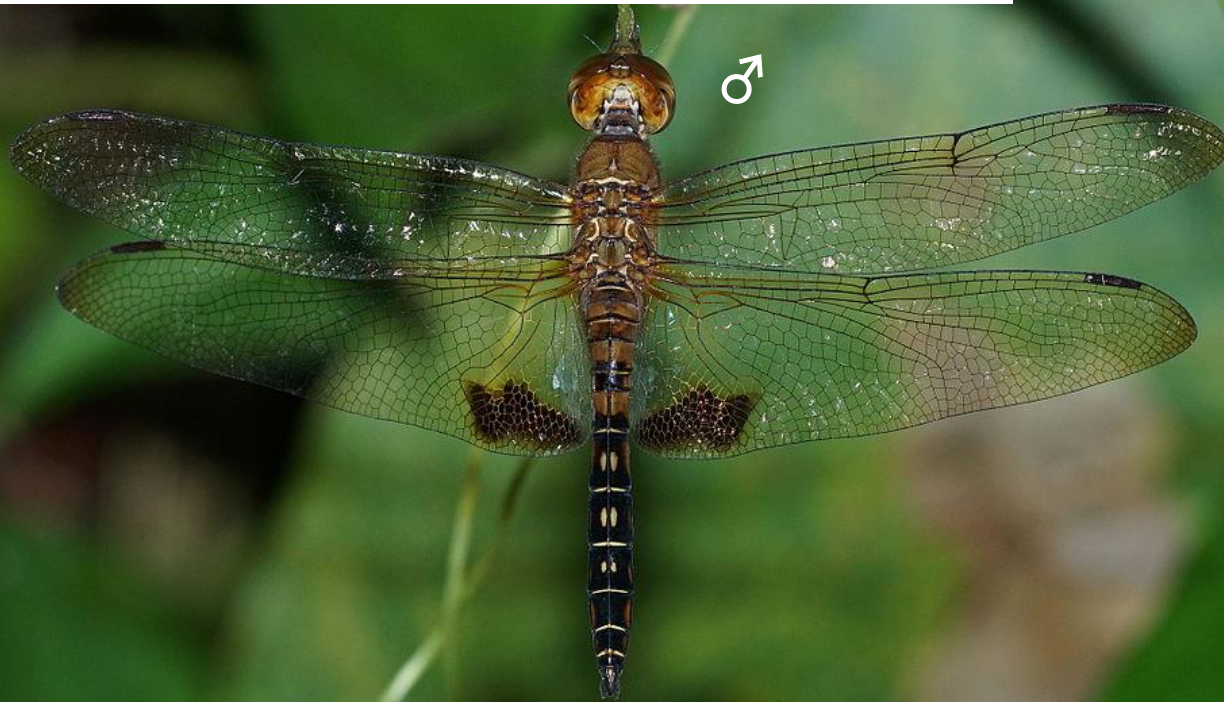
•Female is golden yellow, marked with black



# *Hydrobasileus croceus* (Brauer, 1867)

## പാണ്ടൻ പരുന്തൻ

- Large dragonfly with brown-capped olivaceous eyes and reddish frons
- Thorax is olivaceous brown
- Abdomen is olivaceous brown, changing to ochreous towards anal end, marked with black and yellow
- Wings are palely tinted throughout with golden amber; base of hindwings have moderately broad dark reddish-brown marks





# *Hydrobasileus croceus* (Brauer, 1867)

പാണ്ടൻ പരുന്തൻ

•Female is similar to the male, but paler and stouter

♀



# *Hylaeothemis apicalis* Fraser, 1924

നീലനീർത്തൊഴുൻ

•*Hylaeothemis indica* is a junior synonym

♂

- Medium sized dragonfly with bluish green eyes and black thorax, marked with pale blue
- Abdomen is slim and black, marked with pale blue stripes
- Segment 7 has a large dorsal spot in pale blue



# *Hylaeothemis apicalis* Fraser, 1924

നീലനീർത്തൊഴുൻ



- Female is greenish yellow instead of blue, like the sub-adult male
- Wings are broadly tipped with dark brown in adults

# *Indothemis carnatica* (Fabricius, 1798)

കരിമ്പൻ ചരൽമുത്തി

- Small dark violaceous dragonfly with yellow markings
- Blackish brown face marked with yellow spots at the sides of frons and postclypeus
- Young males and females have yellowish markings which are obscured by violaceous pruinescence in adult males
- Wings hyaline, with a small point of amber-yellow at the base of hindwings; pterostigma bright ochreous between thick black nervures
- Anal appendages are pale yellow tipped with black





# *Indothemis carnatica* (Fabricius, 1798)

കരിമ്പൻ ചരൽമുത്തി

- Female is golden-yellow, marked with black

♀



# *Indothemis limbata* (Selys, 1891)

പാണ്ടൻ കരിമുത്തൻ



- Small black dragonfly with dark eyes and face
- Distinctively large black/dark brown patch at the base of hindwings
- Anal appendages are pale yellow in young males and black in adult males
- Young males have yellowish markings on the abdomen from S1 to S8
- Female bright yellow; thorax marked with black and dark brown stripes, abdomen marked with more yellow, anal appendages black



# *Lathrecista asiatica* (Fabricius, 1798)

ചോരവാലൻ തുമ്പി

- Medium sized dragonfly with brown-capped grey eyes and copper brown thorax, marked with yellow stripes
- Abdomen is blood red, with last two segments black



# *Lathrecista asiatica* (Fabricius, 1798)

ചോരവാലൻ തുമ്പി

- Abdomen of the female is light brown in stead of red
- Apices of wings tipped with brown

♀





# *Lyriothemis acigastra* (Selys, 1878)

കുളുൻ വർണ്ണത്തുമ്പി

- Small dragonfly with brown-capped greenish yellow eyes
- Thorax is blackish brown, marked with yellow
- Abdomen is red, tapered from base to end, and marked with black



# *Lyriothemis acigastra* (Selys, 1878)

കുളുൻ വർണ്ണത്തുമ്പി

- Female is reddish yellow in colour instead of red
- Abdomen is cylindrical rather than tapered from base to end

♀





# *Lyriothemis tricolor* Ris, 1919

മഞ്ഞവരയൻ വർണ്ണത്തുമ്പി



- Medium sized dragonfly with brown-capped greenish yellow eyes
- Thorax is blackish brown, marked with yellow
- Abdomen is red, marked with black
- Breeds in water collected inside the tree holes of evergreen and semi-evergreen forests



# *Lyriothemis tricolor* Ris, 1919

മഞ്ഞവരയൻ വർണ്ണത്തുമ്പി

•Female is a small, robustly built dragonfly with black and yellow markings

♀

Balachandran V

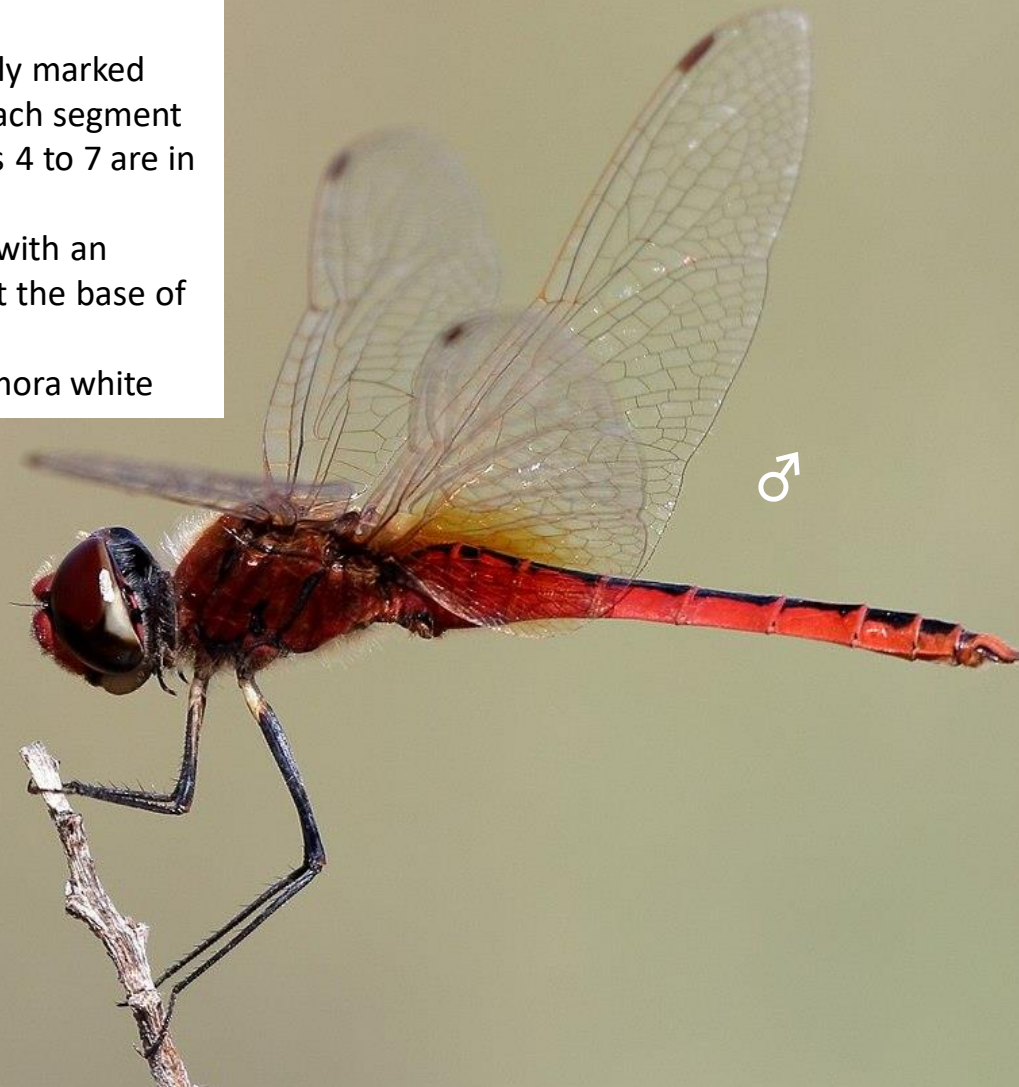
© [Balachandran V](#)



# *Macrodiplax cora* (Kaup in Brauer, 1867)

പൊഴിത്തുമ്പി

- Medium sized dragonfly with red eyes, frons and thorax
- Abdomen is red, dorsally marked with black patches on each segment
- The marks on segments 4 to 7 are in the shape of dumbbells
- Wings are transparent with an amber coloured patch at the base of hindwings
- Legs black; bases of femora white



# *Macrodiplax cora* (Kaup in Brauer, 1867)

പൊഴിത്തുമ്പി

- Female is yellowish brown marked with black as in young males

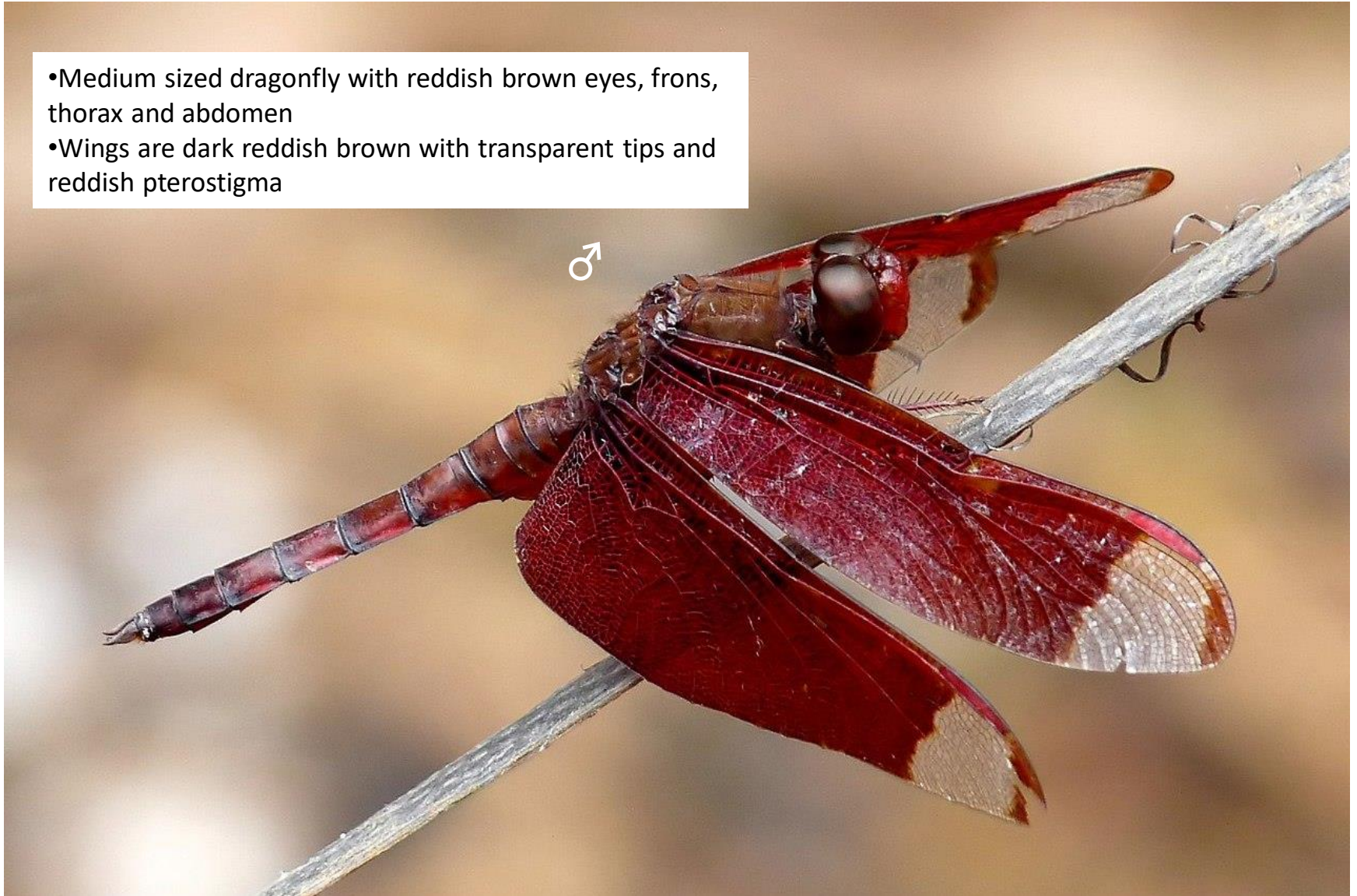




# *Neurothemis fulvia* (Drury, 1773)

തുരുമ്പൻ തുമ്പി

- Medium sized dragonfly with reddish brown eyes, frons, thorax and abdomen
- Wings are dark reddish brown with transparent tips and reddish pterostigma



# *Neurothemis fulvia* (Drury, 1773)

തുരുമ്പൻ തുമ്പി

- Female is pale rusty brown
- Wings are amber yellow; some individuals have irregular transparent or pale coloured apical windows

♀





# *Neurothemis intermedia* (Rambur, 1842)

പുരുത്തുരുമ്പൻ

- Medium sized dragonfly with brown-capped yellowish eyes, reddish yellow thorax and abdomen
- There is a broken ventro-lateral dark stripe in the abdominal segments
- Has a broad basal amber-yellow marking at the bases of all wings



# *Neurothemis intermedia* (Rambur, 1842)

പൂർത്തുരുമ്പൻ

- Female is similar to the male, but the ventro-lateral dark stripe in the abdominal segments is more sharply defined
- Wings are transparent; amber-yellow marking at base of wings absent

♀



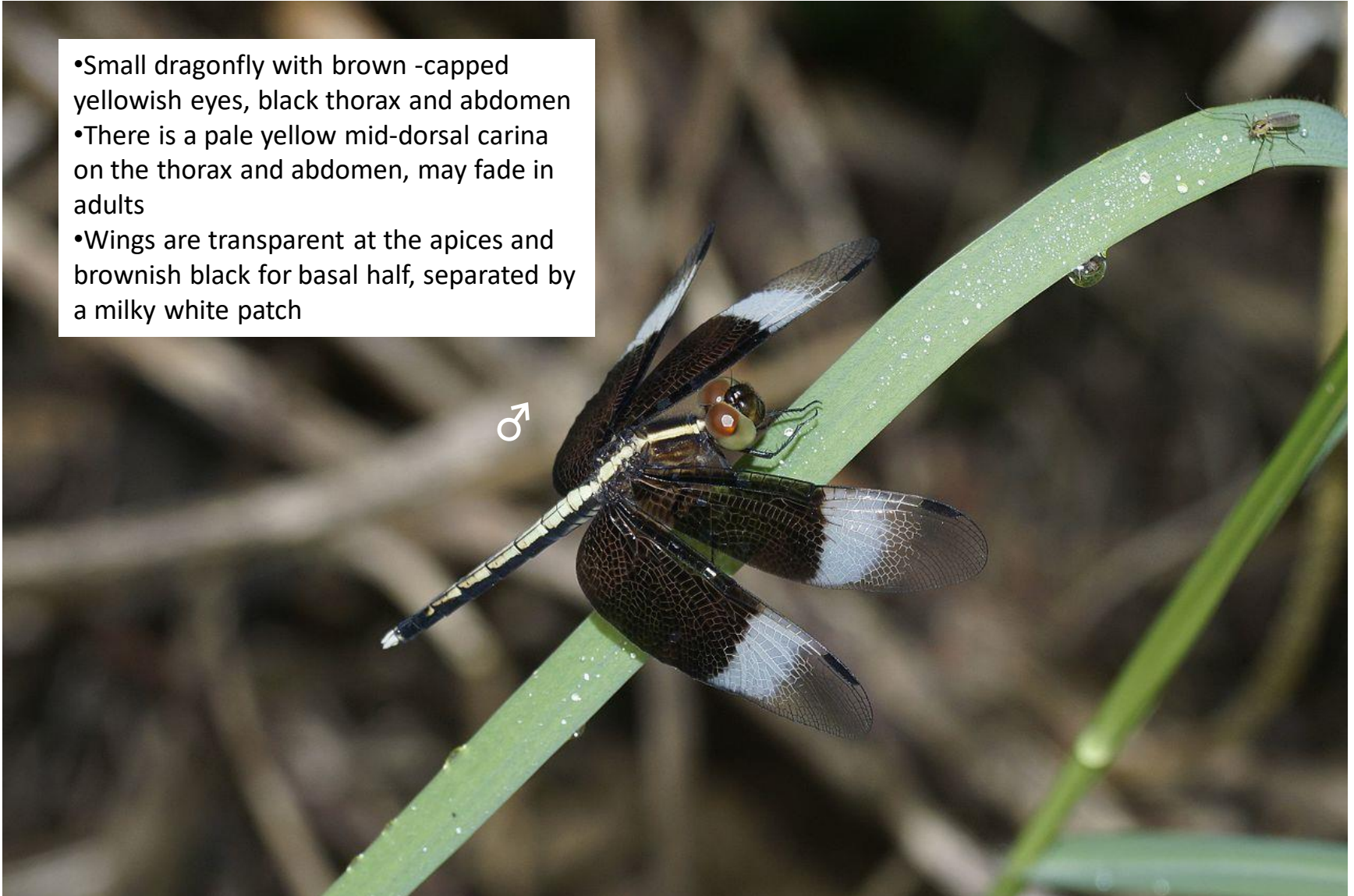


# *Neurothemis tullia* (Drury, 1773)

സപാമിത്തുമ്പി

- Small dragonfly with brown -capped yellowish eyes, black thorax and abdomen
- There is a pale yellow mid-dorsal carina on the thorax and abdomen, may fade in adults
- Wings are transparent at the apices and brownish black for basal half, separated by a milky white patch

♂



# *Neurothemis tullia* (Drury, 1773)

## സ്വാമിത്തുമ്പി

- In females, thorax is greenish yellow with a bright yellow mid-dorsal carina, bordered with black
- Abdomen is yellow; laterally marked with a broad black stripe on each side, merge together at the dorsum of segments 8-9

♀

- Base of wings are amber yellow followed by a blackish brown patch
- Apices of all wings are blackish brown; the two brown patches separated by white nervures

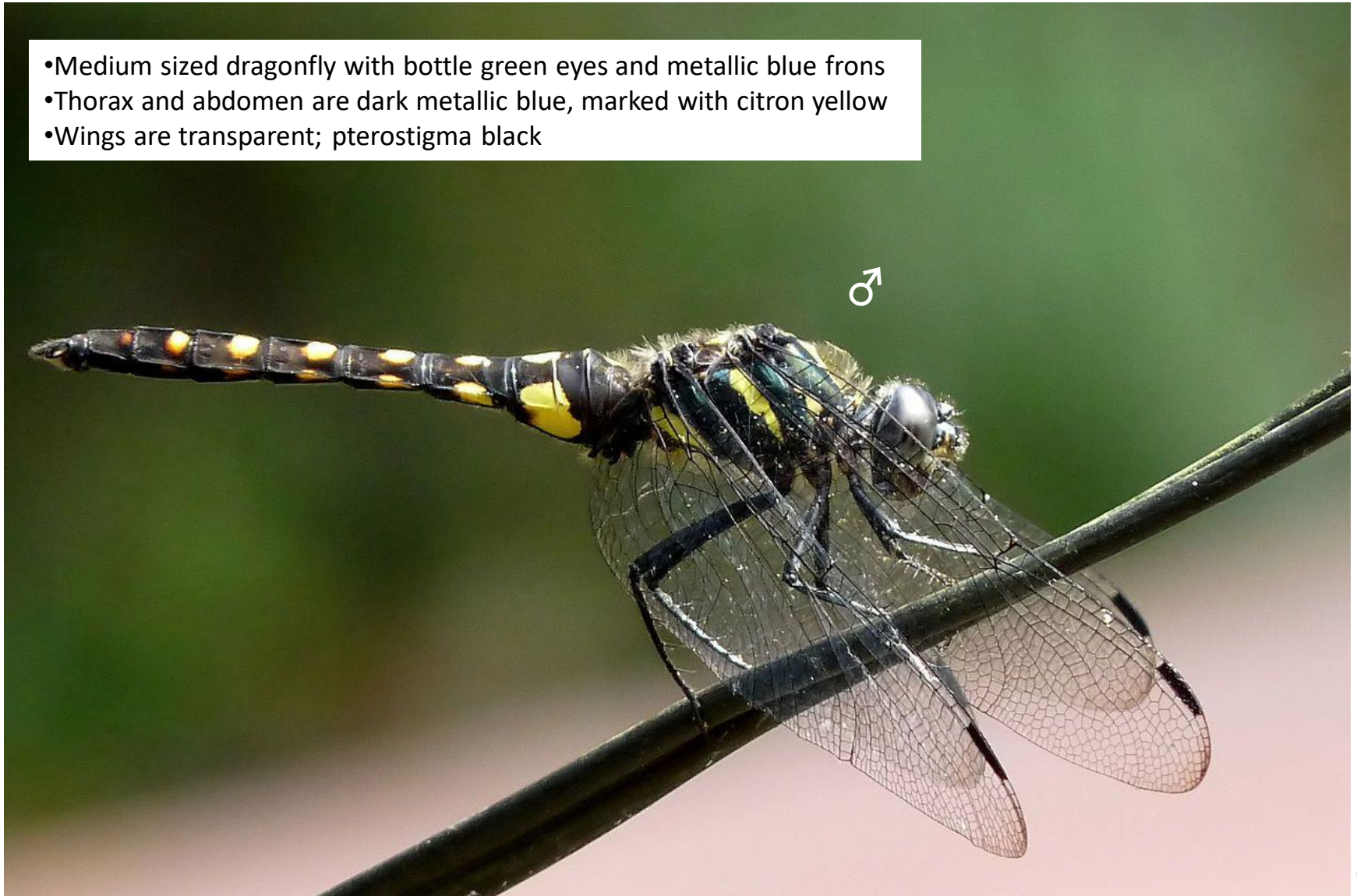


# *Onychothemis testacea* Laidlaw, 1902

കാട്ടുപുളു

- Medium sized dragonfly with bottle green eyes and metallic blue frons
- Thorax and abdomen are dark metallic blue, marked with citron yellow
- Wings are transparent; pterostigma black

♂



# *Onychothemis testacea* Laidlaw, 1902

കാട്ടുപുള്ളൻ

- Female is similar to the male except in sexual characters
- Abdomen is shorter and stouter

♀





# *Orthetrum chrysis* (Selys, 1891)

## ചെന്തവിടൻ വ്യാളി

- Medium sized dragonfly with reddish brown eyes, red face and frons
- Thorax is dark brown and abdomen is blood red
- Wings are transparent, with a small amber patch at the base
- Looks very similar to *Orthetrum pruinosum* in shape and size, but can be distinguished by the colour of the abdomen (blood red in *O.chrysis*) & colour of the frons (bright red in *O.chrysis*)

♂



# *Orthetrum chrysis* (Selys, 1891)

ചെന്തവിടൻ വ്യാളി

- Female has brown eyes
- Thorax is brown; abdomen is bright ochreous
- Wings are transparent without any patch at the base
- The expansions on segment 8 of abdomen are black

♀





# *Orthetrum glaucum* (Brauer, 1865)

നീലവ്യാളി



- Medium sized dragonfly with dark face and blue eyes
- Thorax and abdomen are dark with yellow markings; but obscured by blue pruinescence in old males
- Last two segments of abdomen are black
- Wings are transparent with dark amber yellow tint at the extreme base

# *Orthetrum glaucum* (Brauer, 1865)

## നീലവ്യാളി

- Female thorax and abdomen are dark with yellow markings as in young male
- Abdomen has slight blue pruinescence when aged
- Wings are transparent, but more enfumed in adults

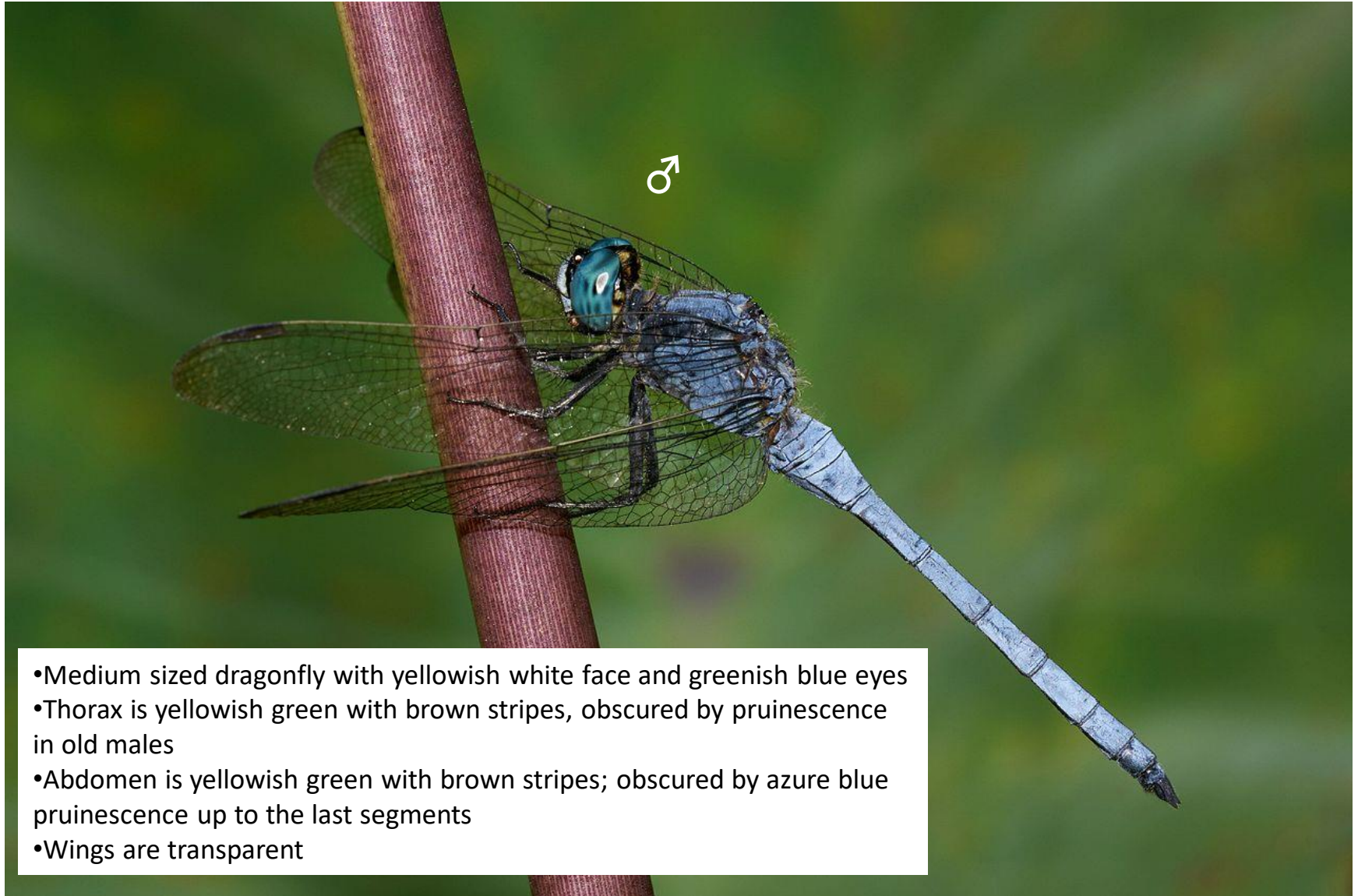
♀





# *Orthetrum luzonicum* (Brauer, 1868)

ത്രിവർണ്ണൻ വ്യാളി



- Medium sized dragonfly with yellowish white face and greenish blue eyes
- Thorax is yellowish green with brown stripes, obscured by pruinescence in old males
- Abdomen is yellowish green with brown stripes; obscured by azure blue pruinescence up to the last segments
- Wings are transparent

# *Orthetrum luzonicum* (Brauer, 1868)

## ത്രിവർണ്ണൻ വ്യാളി

- Female has brown capped bluish green eyes
- Thorax is greenish yellow, marked with brown
- Abdomen is greenish yellow with black mid-dorsal carina, sutures and broad sub-dorsal stripes those meet at segment 8
- Thinner abdomen help to separate it from female *O.glaucum*

♀

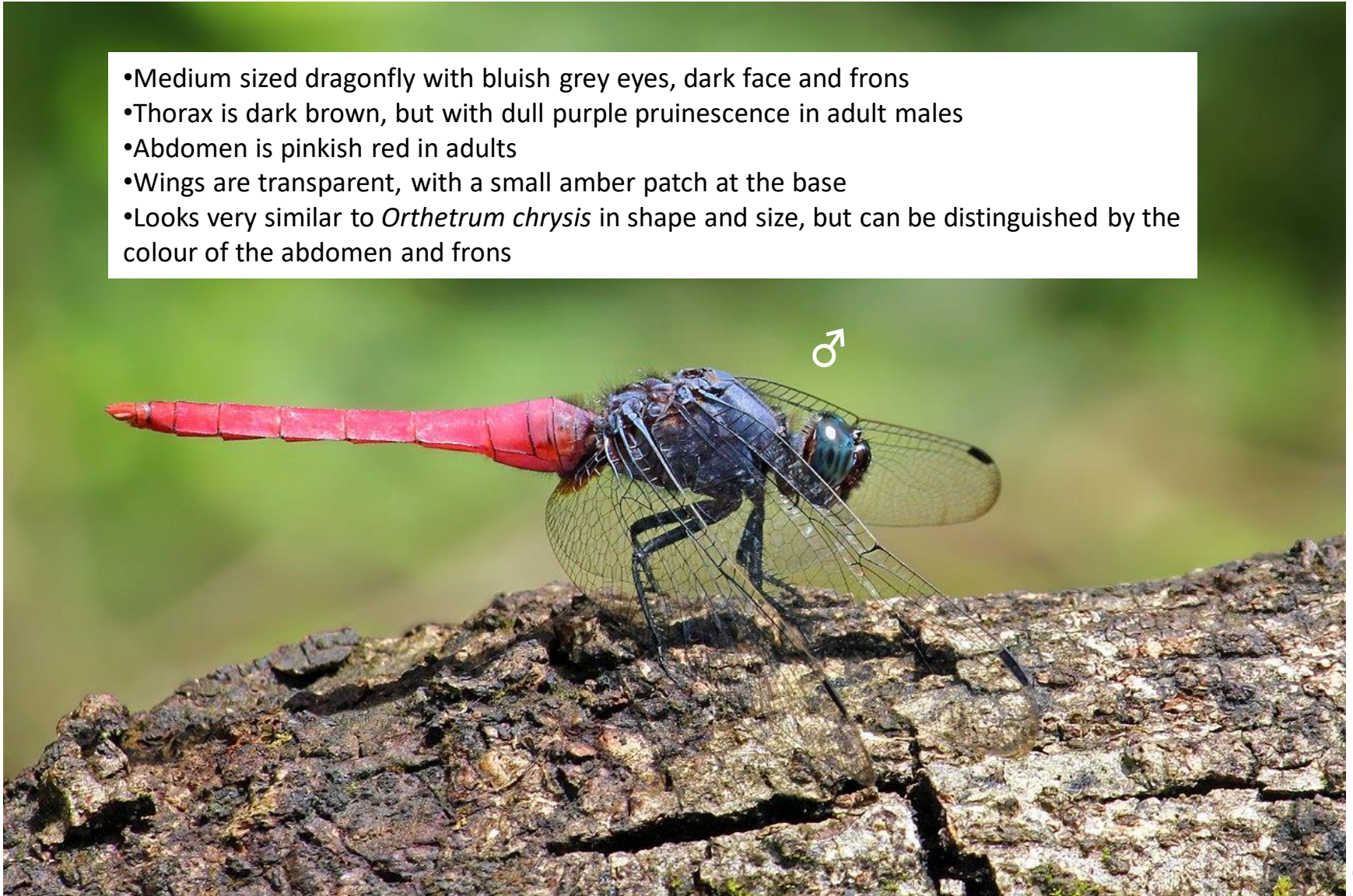




# *Orthetrum pruinsum* (Burmeister, 1839)

## പവിഴവാലൻ വ്യാളി

- Medium sized dragonfly with bluish grey eyes, dark face and frons
- Thorax is dark brown, but with dull purple pruinescence in adult males
- Abdomen is pinkish red in adults
- Wings are transparent, with a small amber patch at the base
- Looks very similar to *Orthetrum chrysis* in shape and size, but can be distinguished by the colour of the abdomen and frons





# *Orthetrum pruinatum* (Burmeister, 1839)

പവിഴവാലൻ വൃാളി

♀

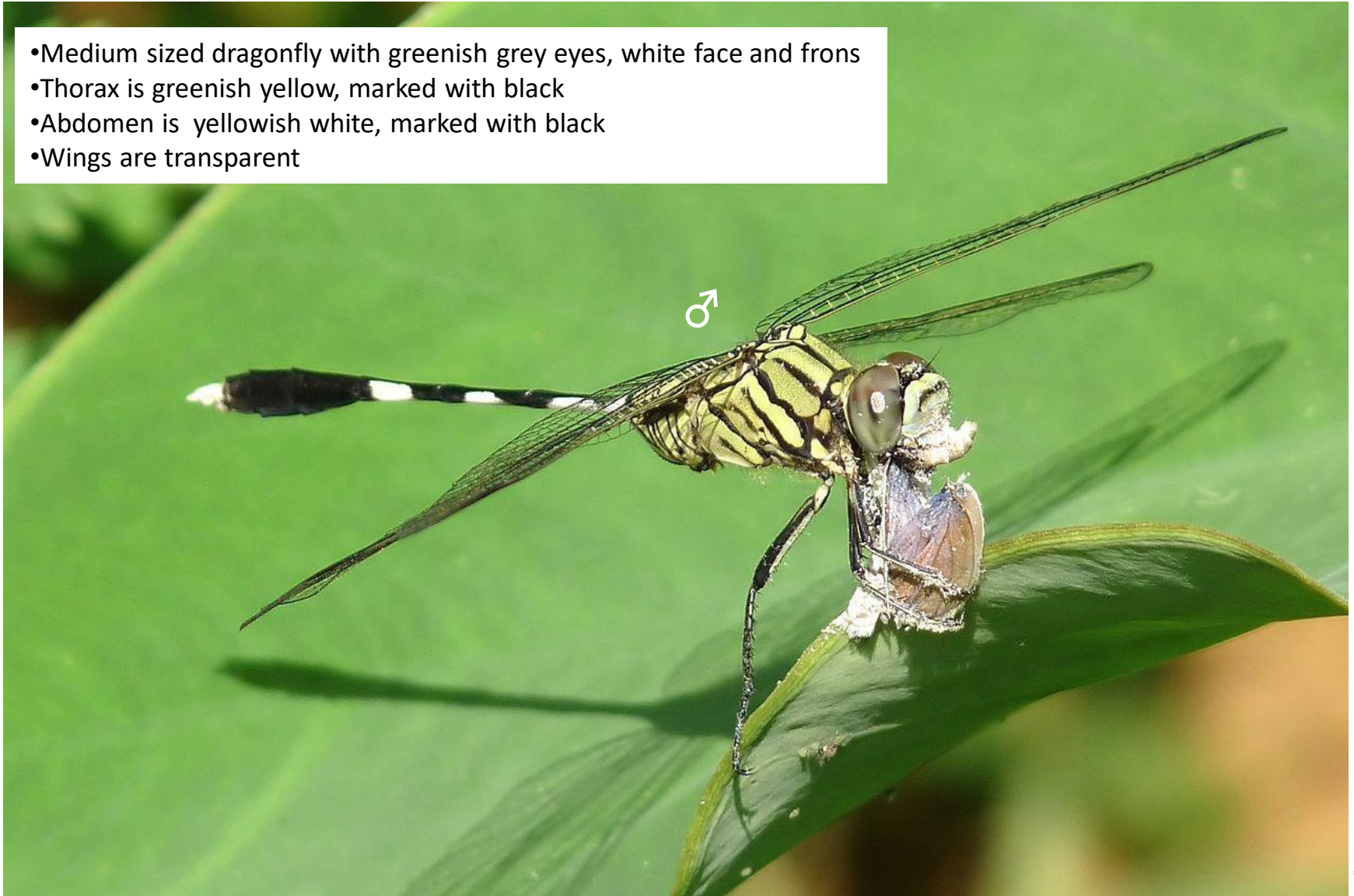
- Abdomen of the female is dull ochreous
- Wings are transparent; patch at the base is paler or absent
- The expansions on segment 8 of abdomen are black
- Can be separated from the female *O. chrysis* by its bluish-grey eyes and less brown thorax



# *Orthetrum sabina* (Drury, 1770)

പച്ചവയാളി

- Medium sized dragonfly with greenish grey eyes, white face and frons
- Thorax is greenish yellow, marked with black
- Abdomen is yellowish white, marked with black
- Wings are transparent



# *Orthetrum sabina* (Drury, 1770)

പച്ചവയാളി



•Female is similar to the male, differing only in sexual characters



# *Orthetrum taeniolatum* (Schneider, 1845)

ചെറുവൃാളി



- Medium sized dragonfly with brown capped blue eyes
- Thorax and abdomen are pale brown with yellowish green stripes, obscured by powdery blue pruinescence in old males
- Wings are transparent



# *Orthetrum taeniolatum* (Schneider, 1845)

ചെറുവൃഗളി

- Female thorax is pale brown with yellowish green stripes as in young males
- Abdomen is yellowish brown, marked with a mid-dorsal black stripe





# *Orthetrum triangulare* (Selys, 1878)

നീലക്കറുപ്പൻ വ്യാളി

♂

- Medium sized dragonfly with dark face and dark blue eyes
- Thorax is black with broad greenish yellow markings on both sides
- Segments 1-2 and 8-10 of abdomen are black and the remaining segments are pruinosed with azure blue
- Wings are transparent with dark triangular patches at the base of hindwings



# *Orthetrum triangulare* (Selys, 1878)

നീലക്കറുപ്പൻ വ്യാളി



- Female thorax and abdomen are dark with yellow markings as in young male
- Abdomen has no pruinescence
- Wings are transparent, but more enfumed in adults
- Basal black spots on wings entirely absent, instead tinted with golden yellow

© Abhin M Sunil



# *Palpopleura sexmaculata* (Fabricius, 1787)

## നീലക്കുറുവാലൻ

- Small dragonfly with brown capped greenish blue eyes
- Thorax and abdomen are yellowish green with dark brown stripes, obscured by pale blue pruinescence in old males
- Wings are transparent; hindwings usually tinted with yellow from the base
- The pterostigma of young males and female are bi-coloured with part black and part yellow



# *Palpopleura sexmaculata* (Fabricius, 1787)

നീലക്കുറുവാലൻ

♀



- Female thorax and abdomen are yellowish with dark brown stripes as in young males
- Hindwings usually tinted with yellow from the base to apices



# *Pantala flavescens* (Fabricius, 1798)

## തൂലാത്തുമ്പി

- Medium sized dragonfly with reddish brown-capped bluish grey eyes and yellow frons
- Thorax is olivaceous and hairy
- Abdomen is yellowish red, marked with black and it shows a constriction at segment 3
- Wings are transparent; there is an apical brown spot on the posterior border of hindwings in males



# *Pantala flavescens* (Fabricius, 1798)

തൂലാത്തുമ്പി

- Female is similar to the male, but paler in colours
- Abdomen is not constricted at segment 3
- Wings lack the apical brown spot of the males

♀





# *Potamarcha congener* (Rambur, 1842)

പുള്ളിവാലൻതുമ്പി

- Medium sized dragonfly with brown-capped yellow eyes and copper brown thorax, marked with yellow stripes
- Abdomen is dark brown with broad yellow markings
- Thorax and abdomen are covered with ashy blue pruinescence in adult males



# *Potamarcha congener* (Rambur, 1842)

## പുള്ളിവാലൻതുമ്പി

- Abdomen and thorax of female is dark brown with broad yellow markings as in young male
- The yellow stripes on the sides of abdominal segments are broader compared to *Cratilla lineata*
- Segment 8 of the abdomen broadly dilated laterally

♀





# *Rhodothemis rufa* (Rambur, 1842)

ചെമ്പൻതുമ്പി



- Medium sized dragonfly with red eyes, thorax and abdomen
- Young males and females have a mid-dorsal citron-yellow stripe in the prothorax, thorax and basal abdominal segments
- These marks get obscured by red pruinescence in adult males



# *Rhodothemis rufa* (Rambur, 1842)

ചെമ്പൻതുമ്പി

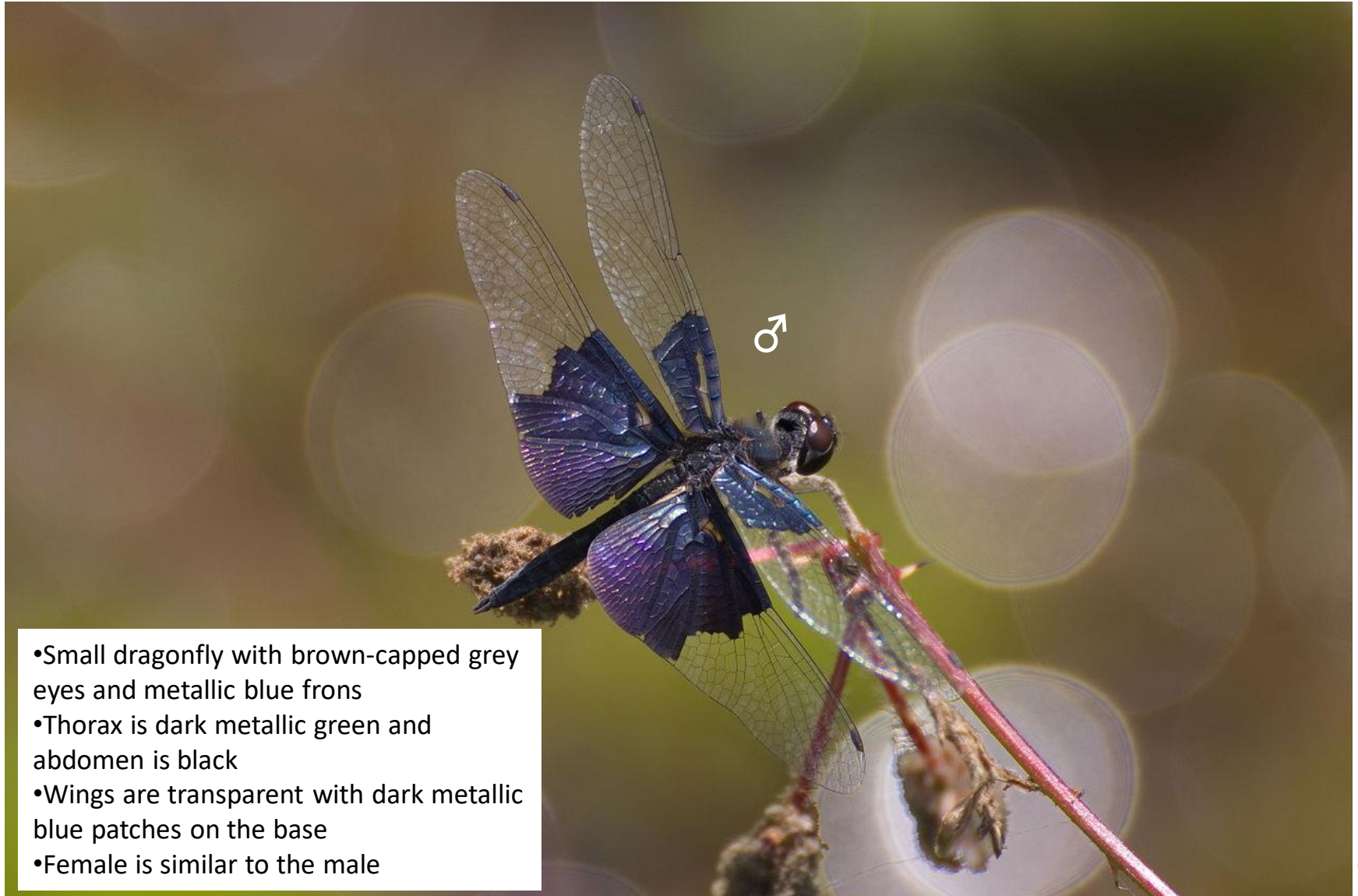


- Female is brown
- Has a mid-dorsal citron-ellow stripe in the prothorax, thorax and basal abdominal segments as in young male



# *Rhyothemis triangularis* Kirby, 1889

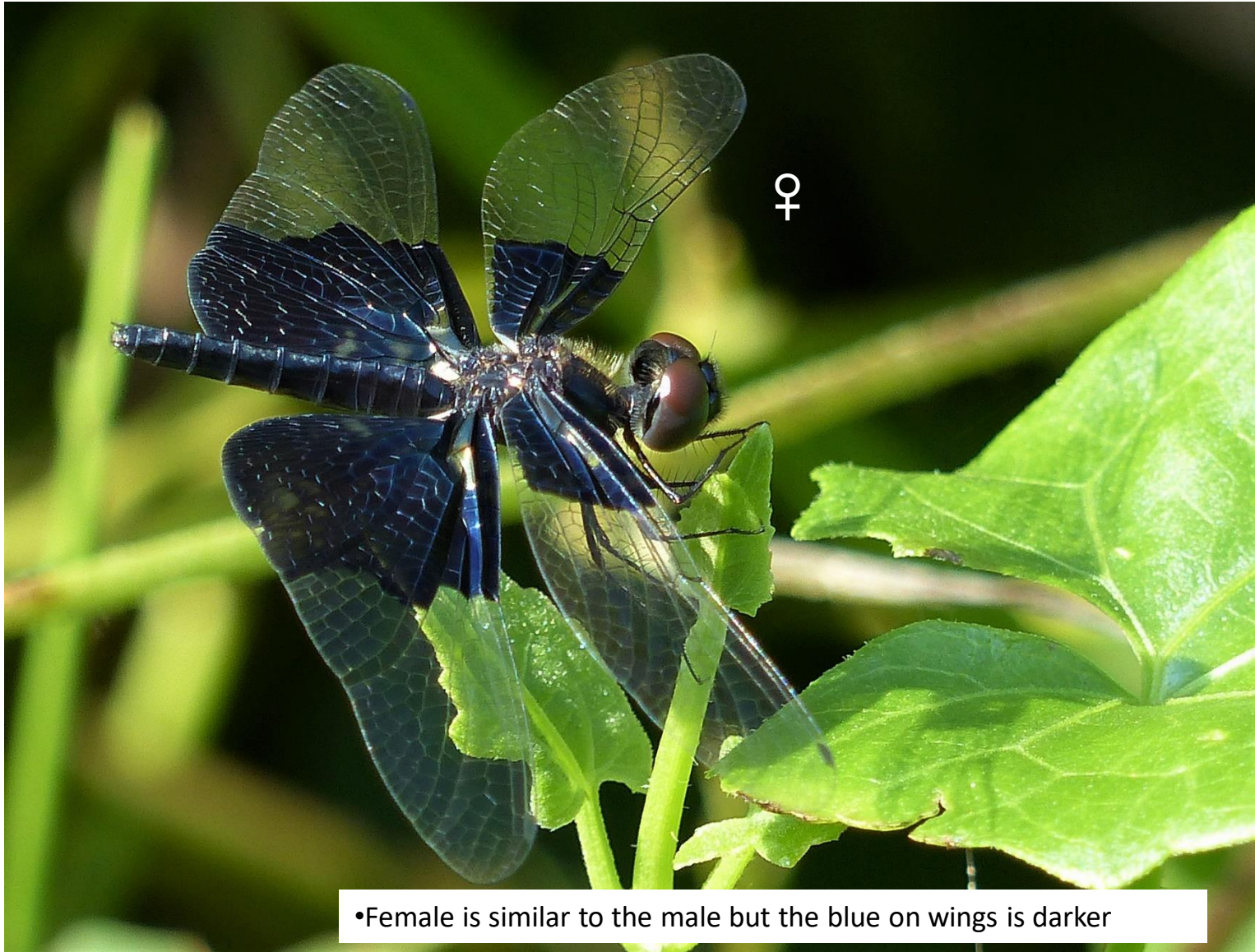
കരിനീലച്ചിറകൻ



- Small dragonfly with brown-capped grey eyes and metallic blue frons
- Thorax is dark metallic green and abdomen is black
- Wings are transparent with dark metallic blue patches on the base
- Female is similar to the male

# *Rhyothemis triangularis* Kirby, 1889

കരിനീലച്ചിറകൻ



© Balachandran V



# *Rhyothemis variegata* (Linnaeus, 1763)

## ഓണത്തുമ്പി

- Medium sized dragonfly with brown-capped grey eyes and metallic green frons
- Thorax is dark metallic green and abdomen is black
- Wings palely tinted throughout with yellow; a few black spots at the apices and nodes of the forewings and a large patch at the base of the hindwings, marked with black and golden yellow



# *Rhyothemis variegata* (Linnaeus, 1763)

## ഓണത്തുമ്പി

- Female is similar to the male, but wings differ in shape and markings
- Apical half of the fore-wings are transparent; basal half tinted in golden yellow with black marks
- Apical ends of the hind-wings are transparent; rest of wings marked with golden yellow and black
- Hindwings are very broad

♀





# *Sympetrum fonscolombii* (Selys, 1840)

കുങ്കുമച്ചിറകൻ



- Medium sized dragonfly with brown-capped grey eyes, red face, frons, thorax and abdomen
- Wings have red veins and the wing bases of the hindwings are yellow
- Pterostigma pale yellow bordered with black veins
- Dorsum of last segments of the abdomen are black

# *Sympetrum fonscolombii* (Selys, 1840)

## കുങ്കുമച്ചിറകൻ

- Female is ochreous yellow, marked with black
- Wings have red veins and bases of the hindwings are yellow
- Abdomen has two lateral black stripes running parallel and meeting at segments 8-9
- Dorsum of last segments of the abdomen are black





# *Tetrathemis platyptera* Selys, 1878

## കുള്ളൻതുമ്പി

- Small dragonfly with bluish green eyes
- Thorax and abdomen are yellow with broad black markings
- Wings are transparent, with forewings faintly and hindwings broadly tinted with yellow at base
- Female stabs the eggs on dry twigs hanging over water
- The eggs hatch out in rains and the larvae fall into the water below



# *Tetrathemis platyptera* Selys, 1878

കുളുൻതുമ്പി

•Female is similar to the male, but more robustly built

♀



© Rison Thumbor



# *Tholymis tillarga* (Fabricius, 1798)

## പവിഴവാലൻ

- Medium sized crepuscular dragonfly with brown-capped olivaceous eyes and reddish frons
- Thorax is reddish on dorsum and golden yellow at the sides
- Abdomen is coral red
- Wings are transparent, but hindwings have golden brown patches at the base, bordered by a cloudy-white patch



# *Tholymis tillarga* (Fabricius, 1798)

പവിഴവാലൻ

♀

- Female is pale brown without any red tinge
- Hindwings have pale golden brown patches at the base, but lacks the cloudy-white patch



# *Tramea basilaris* (Palisot de Beauvois, 1817)

ചെമ്പൻ പരുന്തൻ

- Medium sized dragonfly with brown-capped grey eyes and red frons
- Thorax is olivaceous with black stripes
- Abdomen is brick red, marked with black; last segments are black, ringed with yellow
- There are two brownish black patches surrounded by a golden yellow areola at the base of each hindwing
- Anal appendages are very long



# *Tramea basilaris* (Palisot de Beauvois, 1817)

ചെമ്പൻ പരുന്തൻ

- Female is similar to the male, but yellowish in colour

♀





# *Tramea limbata* (Desjardins, 1832)

## കരിമ്പൻ പരുന്തൻ

- Medium sized dragonfly with brown-capped grey eyes and violet frons
- Thorax is olivaceous with some narrow dark stripes
- Abdomen is brick red, marked with black; last segments are black



- There is a brownish black patch at the base of each hindwing (not surrounded by golden yellow areola as in the former species)
- Anal appendages are very long

# *Tramea limbata* (Desjardins, 1832)

കരിമ്പൻ പരുന്തൻ

- Female is similar to the male, differing mostly in sexual characters





# *Trithemis aurora* (Burmeister, 1839)

സിന്ദൂരത്തുമ്പി

- Medium sized dragonfly with crimson red eyes, face, thorax and abdomen
- Wings are transparent with crimson venation and the base has a broad amber patch
- Pterostigma dark brown



# *Trithemis aurora* (Burmeister, 1839)

സിന്ദൂരത്തുമ്പി



♀

- Female has brown capped grey eyes
- Thorax and abdomen are yellowish brown, marked with black
- Wings are transparent; the base has a broad amber patch
- Wings often tipped with brown



# *Trithemis festiva* (Rambur, 1842)

കാർത്തുസ്ഥി

- Medium sized dragonfly with brown-capped grey eyes and purple face
- Thorax and abdomen are dark brown with yellowish red marks, covered with purple pruinescence in adult males

♂



# *Trithemis festiva* (Rambur, 1842)

കാർത്തുമ്പി

- Female lacks the purple pruinescence
- Thorax and abdomen are yellowish brown, marked with black

♀





# *Trithemis kirbyi* Selys, 1891

ചോപ്പൻ പാറമുത്തി



- Medium sized dragonfly with scarlet red eyes, face, thorax and abdomen
- Wings are transparent with broad reddish amber patch at the base and bright red neuration
- Pterostigma black with dirty white membrane
- Small basal black spots on mid-dorsum of S8 & S9

# *Trithemis kirbyi* Selys, 1891

## ചോപ്പൻ പാറമുത്തി

- Female has brown capped grey eyes
- Thorax is yellowish white, marked with black and brown
- Wings are similar to the male, but the amber patch more restricted to the base
- Abdomen is yellowish brown with sub-dorsal black stripes
- Dorsal black spots on abdominal segments 8-9 are as in the male

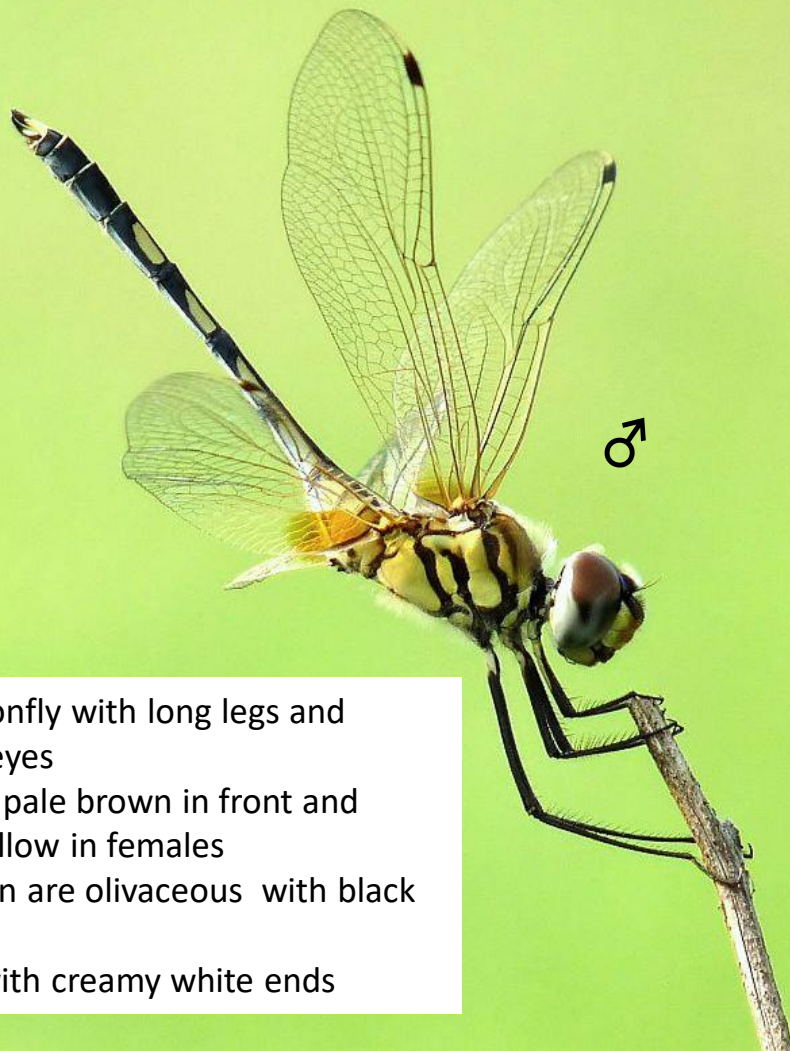
♀





# *Trithemis pallidinervis* (Kirby, 1889)

കാറ്റാടിത്തുമ്പി



- Medium-sized dragonfly with long legs and brown-capped grey eyes
- In males, the face is pale brown in front and purple above. It is yellow in females
- Thorax and abdomen are olivaceous with black markings
- Pterostigma black with creamy white ends



# *Urothemis signata* (Rambur, 1842)

## പാണ്ടൻ വയൽതെയ്യൻ

- Medium sized dragonfly with red eyes, frons and thorax
- Abdomen is red with some black marking on the dorsum of last segments
- Wings are transparent with an amber coloured patch at the base of hindwings





# *Urothemis signata* (Rambur, 1842)

പാണ്ടൻ വയൽതെയ്യൻ

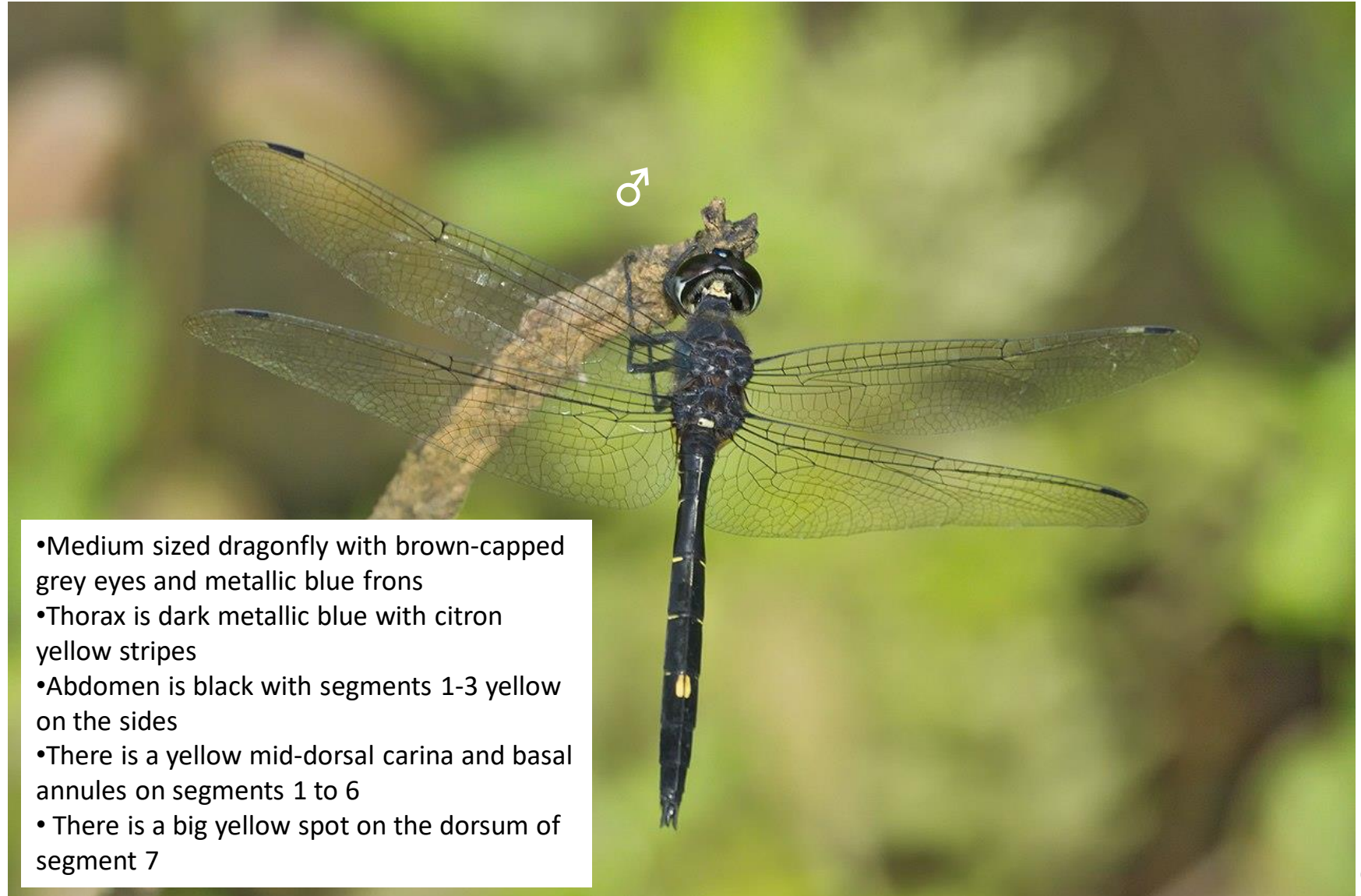
- Female is yellowish brown
- Dorsum of the abdominal segments are marked with black

♀



# *Zygonyx iris* Selys, 1869

നീരോട്ടക്കാരൻ



- Medium sized dragonfly with brown-capped grey eyes and metallic blue frons
- Thorax is dark metallic blue with citron yellow stripes
- Abdomen is black with segments 1-3 yellow on the sides
- There is a yellow mid-dorsal carina and basal annules on segments 1 to 6
- There is a big yellow spot on the dorsum of segment 7



# *Zygonyx iris* Selys, 1869

നീരോട്ടക്കാരൻ

- Female is similar to the male, but more robust and marked with more yellow



# *Zyxomma petiolatum* Rambur, 1842

സൂചിവാലൻ സന്ധ്യാത്തുമ്പി

- Medium sized crepuscular dragonfly with emerald green eyes
- Thorax and abdomen are chocolate brown
- Wings are transparent, but enfumed with brown in adults
- Adult males get pruinosed with dark blue

♂



# *Zyxomma petiolatum* Rambur, 1842

സൂചിവാലൻ സന്ധ്യാത്തുമ്പി



•Female is similar to the male, but does not get pruinose

# Genera *Incertae sedis* (“Enigmatic taxa”)

(കോമരത്തുമ്പികൾ)

- Earlier considered under the family Synthemistidae, their taxonomic status is uncertain now
- Most species are small in size and have narrow abdomens
- Apices of wings rounded; hindwing bases shallowly notched in the male; broadly rounded in the female
- Eyes are usually green; body usually marked with yellow
- Perch vertically with wings wide open while roosting
- Mostly breed in marshes and streams
- Their larvae are bottom-dwellers, and resist droughts by burying themselves very deeply



*Idionyx travancorensis*

© David V Raju

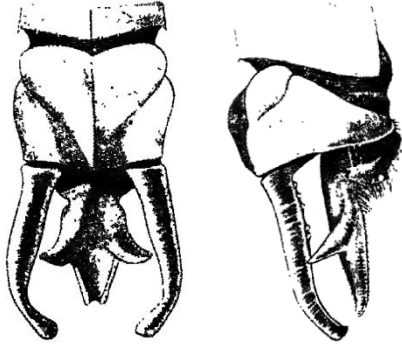


*Macromidia donaldi*

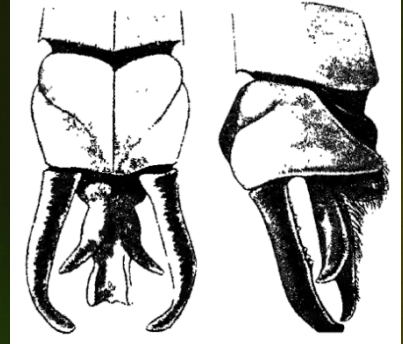
© David V Raju



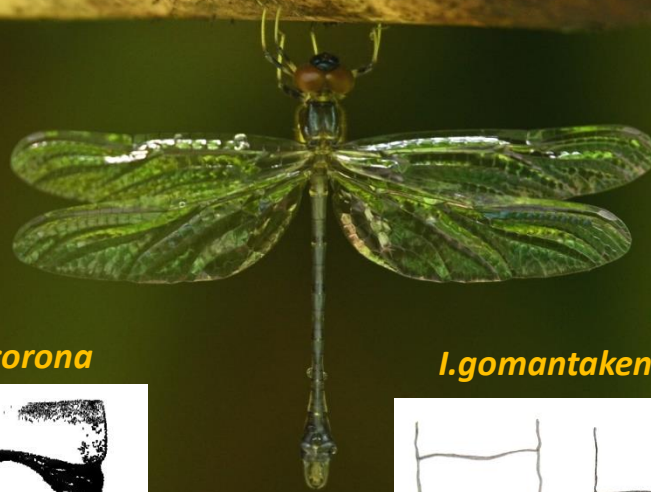
# *Idionyx* species: Dorsal & right lateral views of male anal appendages



*I. travencorensis*



*I. saffronata*

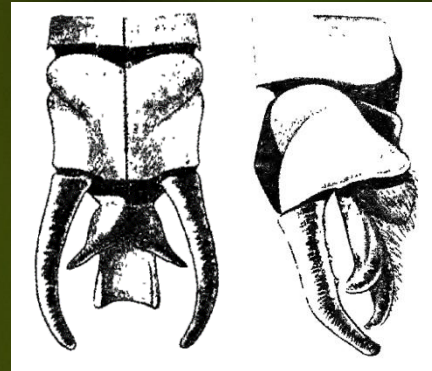
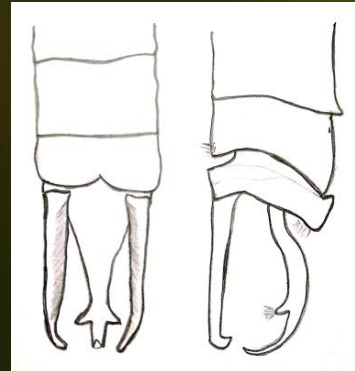
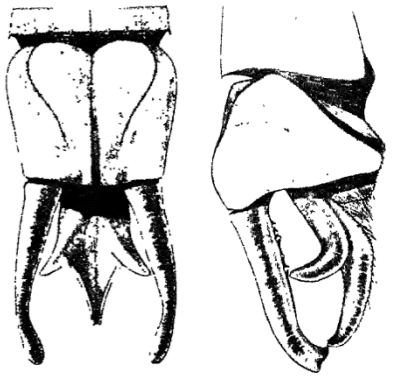


*I. galeata*

*I. corona*

*I. gomantakensis*

*I. minima*



# *Idionyx corona* Fraser, 1921

## നീലഗിരികോമരം

- Small dragonfly with emerald green eyes
- Thorax is metallic green, marked with yellow lateral stripes
- Abdomen is black
- Segments 2 and 3 are narrowly yellow along the ventral border
- Segment 10 prominently keeled
- Wings are transparent, palely tinted with golden yellow along the costa nearly to the pterostigma
- The inferior appendage without lateral spines will serve to distinguish it from others of the group



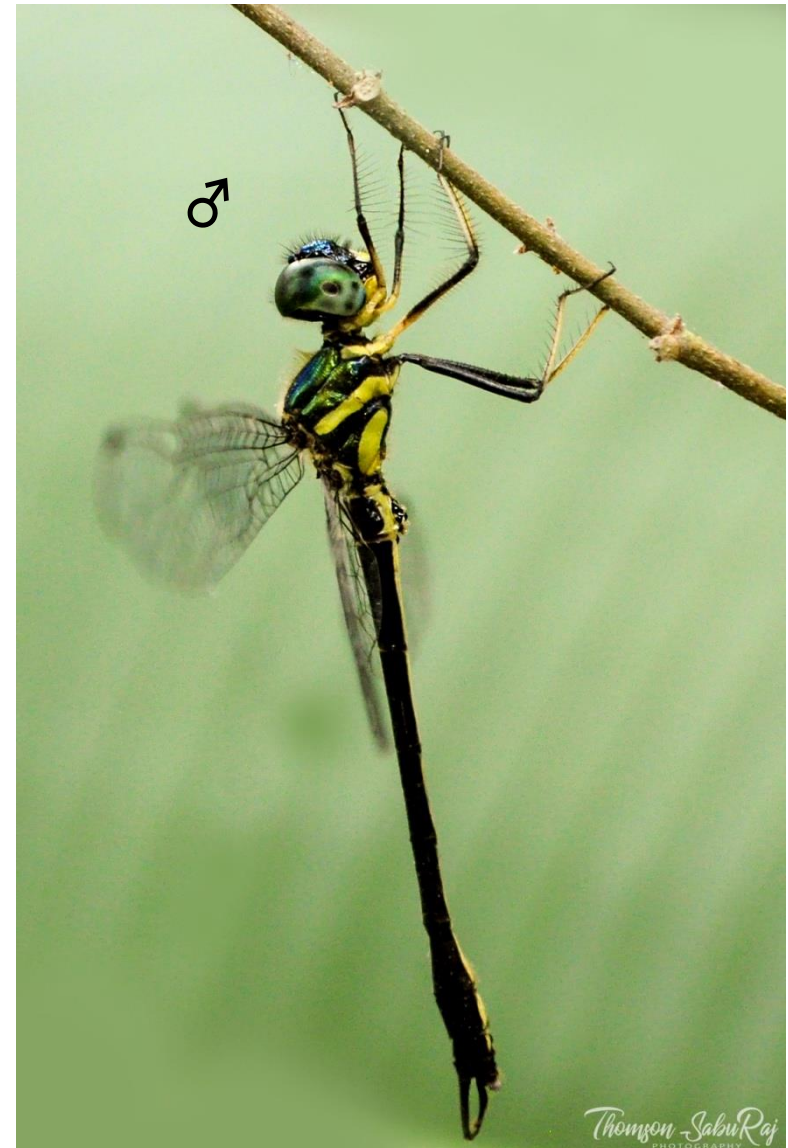
© Thomson Saburaj



# *Idionyx gomantakensis* Subramanian, Rangnekar & Naik, 2013

## ഗോവൻ കോമരം

- Small dragonfly with emerald green eyes
- Thorax is metallic green, marked with yellow lateral stripes
- Abdomen is black, narrowly yellow along the ventral border
- Can be differentiated from other species of *Idionyx* by long and slender cerci and epiproct, absence of teeth in the basal half of the cerci, and a tuft of golden hairs at the end of the lateral lobes of the epiproct



# *Idionyx saffronata* Fraser, 1924

കാവിക്കോമരം



- Medium sized dragonfly with emerald green eyes and bluish green frons
- Thorax is metallic green, marked with yellow lateral stripes
- Abdomen is black
- Segments 1 and 2 are marked narrowly along the ventral borders with citron yellow
- Segments 7 to 10 are bordered with bright yellow
- Segment 10 strongly keeled but without a dorsal spine
- Wings are transparent, palely enfumed

© Parag Rangnekar



# *Idionyx travancorensis* Fraser, 1931

## തെക്കൻ കോമരം

- Medium sized dragonfly with emerald green eyes and bluish green frons
- Thorax is metallic green, marked with yellow lateral stripes
- Abdomen is black, unmarked
- Wings are transparent, palely tinted with yellow
- In female, wings are brownish with bases golden yellow



© Thomson Saburaj



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# *Macromidia donaldi* (Fraser, 1924)

നിഴൽക്കോമരം



- Medium sized crepuscular dragonfly with emerald green eyes and metallic green frons
- Thorax is metallic green, marked with yellow
- Abdomen is black, marked with yellow mid-dorsal stripe
- Segment 7 has a broad club like mark on dorsum
- Wings are transparent



# *Macromidia donaldi* (Fraser, 1924)

നിഴൽക്കോമരം



# Mysterious species

## *Idionyx rhinoceroidea* Fraser, 1934

- Known only from a single female specimen collected by F.C.Fraser in 1934 from Dhoni, Palakkad
- Very similar to *I.corona*
- Distinguished by the unique shape of its vesicle (small eminence in front of the eye where the ocelli are arranged)
- No photograph available



Vesicle of *I.rhinoceroidea*



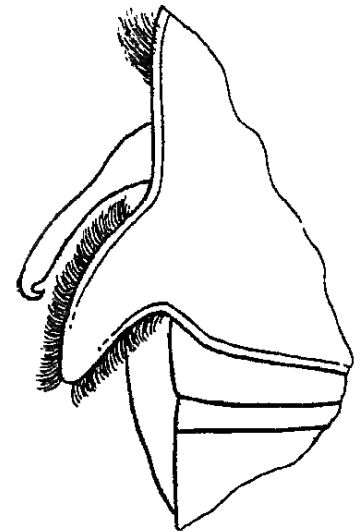
Vesicle of *I.corona*



# Mysterious species

## *Macromia annaimallaiensis* Fraser, 1931

- Relatively large *Macromia* species with emerald green eyes and reddish brown face
- Humeral/antehumeral stripe absent or present only as a vestige
- Two short, dark, reddish brown rays at bases of wings of both sexes, but longer in the female
- Ground colour of thorax dark metallic blue at sides and upper part of dorsum, dark reddish brown at lower part of dorsum
- S3 to S6 with paired mid-dorsal spots; S8 unmarked
- S10 without a dorsal spine
- No photograph available



Secondary genitalia

# Mysterious species

## ***Macromia indica*** Fraser, 1924

- Large *Macromia* species with deep emerald green eyes and dark brown face, very similar to *M. annaimallaiensis*
- Wings with a dark reddish brown ray at base, vestigial in forewings, but extensive in the hind
- Ground colour of abdomen more definitely black, with the yellow annules brighter and broader
- S2 with a very broad annule, covering quite half the length of segment
- All annules on S3 to S6 broadly confluent over dorsum and confluent below with abdominal spots
- The basal spot on S8 always well marked
- S10 with a strong mid-dorsal keel which at the middle of segment is prolonged into a robust spine
- No recent records from Kerala



# Mysterious species

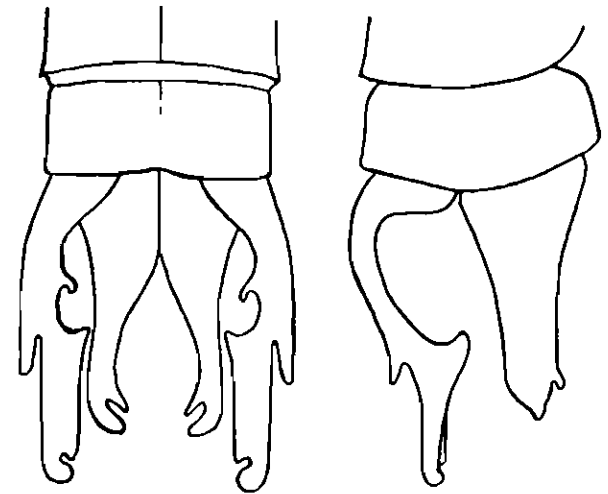
## *Onychogomphus malabarensis* (Fraser, 1924)

- Known from a single female specimen collected from Palakkad in 1921 by T.N.Hearsey
- Humeral stripe absent
- A yellow stripe traverses the medio-lateral black stripe of the thorax
- Occiput yellow, without spines
- S3 to S6 having mid-dorsal yellow spots
- A lateral yellow spot on S8
- S9 & S10 unmarked
- No photograph available

# Mysterious species

## *Protosticta antelopoides* Fraser, 1931

- *Protosticta* species with bottle green eyes
- Legs dirty white with a broad, pale blue ring followed by a black ring towards the distal end of femora
- S8 completely black
- No photograph available



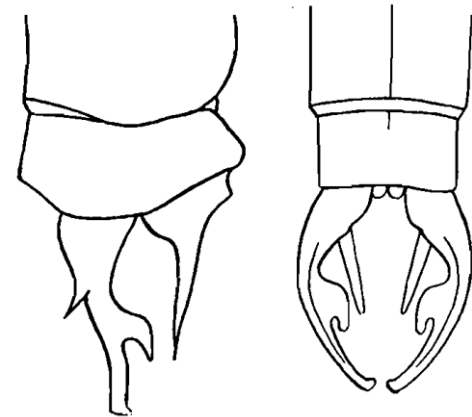
Dorsal and right lateral views of anal appendages



# Mysterious species

## *Protosticta mortoni* Fraser, 1924

- *Protosticta* species with ultramarine blue eyes capped with black
- Was synonymised with *P.gravelyi* for sometime, but raised to species again in 2020
- Legs are white, knees and femora sparsely stippled with black
- Prothorax pale blue except the posterior lobe, which is black
- No photograph available



Right lateral and dorsal views of anal appendages

# Conservation of Odonates



- ✓ Conservation of freshwater habitats like ponds, marshes, streams and wetlands
- ✓ Conservation of remaining forests
- ✓ Reduced use of agrochemicals
- ✓ Habitat enhancement- including digging new ponds and afforestation





# About Society for Odonate Studies

Society for Odonate Studies (SOS) was founded in 2019 by a small group of odonate enthusiasts and citizen scientists. The objective of the Society is to promote the science of Odonatology, the study of the insect order Odonata consisting of dragonflies and damselflies. The mandate of the Society is to:

- Assist, institute, conduct and promote scientific research in Odonatology, the natural history, ecology and conservation of the species, habitats and ecosystems with and within which odonates coexist
- Educate, advocate, create awareness and popularize Odonatology and to develop facilities that disseminate such awareness
- Initiate and scientifically develop innovative solutions to species, habitat and landscape conservation problems that are sensitive to the socio-economic realities and aspirations of people
- Provide consultations and advice to governments, public and private sector organizations, both national and international, on odonate conservation and environmental impacts, as and when required
- Develop and promote programmes to restore damaged and degraded areas to habitats conducive to odonates and other biodiversity
- Develop and establish ex-situ conservation programmes for odonates and threatened wildlife
- Enter into appropriate agreement with the custodians and owners of land and water bodies with significant odonatological and other biodiversity value, so as to manage such lands for odonate and nature conservation
- Publish scientific literature in Odonatology, natural history and biodiversity conservation
- Disseminate knowledge among the public by conducting awareness programmes, training programs, workshops and development of resource materials
- Conduct systematic surveys and exploration in the Western Ghats and other important eco-regions in India to study odonates
- Constitute awards and scholarships to individuals and organizations in recognition of their contribution to odonate conservation and research
- Collaborate with government agencies, non-governmental organizations and individuals engaged in biodiversity conservation and research
- Develop partnerships with other institutions, organizations and individuals, in such manner as to achieve common objectives

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